



# *Magazine* **SAFETY NEWS**

A NATIONAL SAFETY PUBLICATION

With Technical Feature Section

**THE JOURNAL**

of the American Society  
of Safety Engineers

## **PUTTING THE ATOM TO WORK**

**ALSO IN  
THIS ISSUE**

**CREATING OUR FOURTH SEACOAST  
HOPE FOR THE DISABLED**



MEMO:  
TO MANAGEMENT

\* Ordinary shoes  
are costing  
American industry  
millions of dollars  
in lost time injuries  
every year.

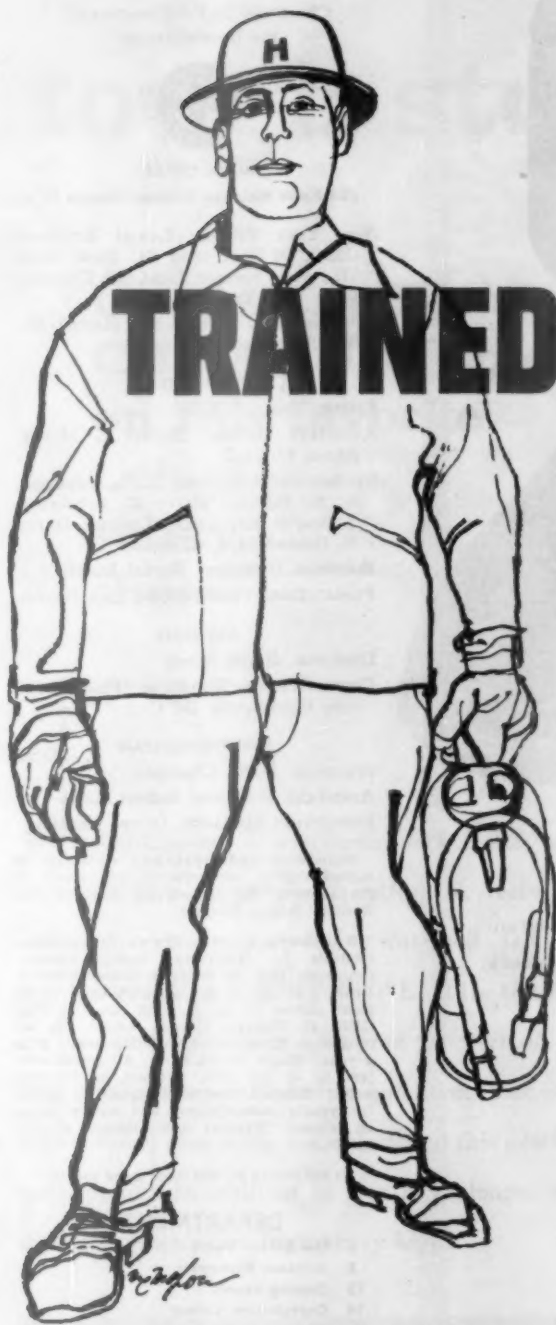
Why not stop this waste with a safety shoe program?  
You can now get maximum toe protection and com-  
fort afforded by the new improved WINGUARDS  
in your safety shoes . . . ranging from the finest  
dress oxfords to heavy duty work boots.

SAFETY  
BOX TOE  
COMPANY  
812 STATLER BUILDING  
BOSTON

\*SHOES WITHOUT SAFETY STEEL TOES

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# National SAFETY NEWS

A NATIONAL SAFETY COUNCIL PUBLICATION

Vol. 77, No. 2

FEBRUARY 1958

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## National Safety Council

Chartered by the Congress of  
the United States



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# tough stuff!

**Goodyear's Famous  
CHEMIGUM® sole  
on this favorite  
Lehigh  
safety  
shoe**



STOCK NO. 1645  
Brown grained  
leather

We tested this sole in a cylinder-block factory where a steel-grid floor is covered with cutting oil, steel chips and shavings; where ordinary heavy duty soles fall apart in 4 to 6 weeks. After 4 MONTHS' WEAR the tread-design on this new Chemigum sole is not yet worn off! Wherever you have severe underfoot conditions that chew up conventional shoe soles, we recommend this new Lehigh construction. In addition to greatly prolonged service, it protects men's toes from heavy blows.

Recommended for	
OIL	X
CAUSTICS	X
METAL CHIPS	X
HEAT	X
CEMENT	X
CINDERS	X
SLIPPING	X
WATER	X
CUSHIONING	X



*tread  
not  
even  
worn off  
after  
4-months  
daily  
service  
in  
cutting oil  
and  
steel chips!*



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## EDITORIAL

# Can't We Improve The Package?

**C**HROMIUM TRIM, smart lines and a two-tone paint job haven't anything to do with safe, efficient or economical motoring—but they do sell cars. They win more customers than the appraisals of current models in *Consumers' Reports* or *Changing Times*.

And don't think women are the only ones who buy cars on looks. Plenty of men don't know or care what's under the hood. But a 375 hp. buggy (400 on special order) with plenty of gadgets makes them feel prosperous and important.

Appearance helps in selling machine tools, too. Streamlined equipment painted in functional colors has a strong appeal to management. Employees like it, too. It gives their spirits a lift, boosts pride in the job, and stimulates them to keep machines and work areas cleaner.

To realize how far we've gone in merchandising just compare a supermarket with an old-time grocery store. Generations of healthy youngsters were raised on oatmeal scooped from a barrel under the counter into a brown paper sack. But people didn't really go for cereals in a big way until the manufacturers started packing them in fancy sanitary packages and worked on the space cadet set through radio and TV to send in box tops for prizes.

Those of us who are trying to sell something intangible—like safety—have a much tougher job than the venders of food and drink. People love excitement and hate to take the time and effort to play it safe.

A lot of our safety merchandising leaves something to be desired. The wise safety man doesn't kid himself that employees can't wait to read his message. It takes all his imagination and ingenuity to put it across. Preaching and tear jerking just scare them away.

The safety thought may be just as true on a dingy, discouraged looking bulletin board but it won't get the attention of a fresh display that looks like a department store's show window.

The employee publication is another medium used effectively by some companies but neglected by many. Too often the editor and the safety man feel they have done their duty with a page of safety and canned material under the uninspired head "Safety News."

Some of the safety features in company publications are done with a real professional touch. The camera and typewriter turn out some picture stories that would be a credit to a national magazine. But, it should be noted, there is real safety effort behind such a story. You can't sell employee readers on a paper program.

Nobody denies the merit of our product, but it could stand some more attractive promotion and packaging.

## NATIONAL SAFETY COUNCIL OFFICERS, 1957-58



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give long wear and cushioned  
comfort in safety shoes by

**Lehigh**



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These low-cut oxfords by Lehigh Safety Shoe Co. bring a new style note to safety shoes. Light and cool, they feature tops of maple tan pebble-grain leather that keep their dress-shoe look on or off the job. Soles and heels are neoprene to give buoyant support and extra wear.

Resilient neoprene puts a spring in every step... takes the fatigue out of standing jobs. Soles of neoprene hold their trim profile despite exposure to oils, grease, corrosive chemicals. They won't spread or soften even under extreme heat.

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# THE SAFETY VALVE

Nothing human is alien to me

—TERENCE



## Religion on the Highway

**D**URING a National Safety Congress a few years ago a church bulletin board carried this message: "Stay alive—Spiritually and Physically!" Certainly the full life needs both.

The pioneers of organized safety work understood its spiritual as well as its material basis. They and their successors have answered Cain's callous rhetorical question, "Am I my brother's keeper?"

Regard for human life has been at the heart of the world's great religions, however much it may have been discarded by some of their adherents. It is a basic human instinct, one not limited to Christianity and Judaism.

Clergymen have been among the most eloquent advocates of safety. Their addresses and invocations have added a spiritual note to many conferences. Laymen, too, have contributed many inspiring messages.



DO-IT-YOURSELF is a world-wide menace. We lifted this cartoon from a German publication, *Sicher Ist Sicher*, which had reprinted it from a French periodical, *Le Magazine de Prevention*. The German caption was "Nicht doch — erst wollte ich einen Nagel!" In English: "Not yet — first I want a nail."

Some of the finest expressions of safety thought will be found in a new anthology, *He Rides Beside You*. It is a collection of speeches, articles, prayers, and poems on traffic safety for use by the clergy and other speakers. The editors are Dan Hollingsworth, manager of the Oklahoma City Safety Council, and Mrs. Ona Belknap.

Many of these gems of thought appeared originally in the Council's magazine, *Traffic Safety*. The authors are clergymen and laymen of many beliefs and some with no formal religious affiliation but with a deep sense of spiritual values.

Reproductions of stained glass windows on the cover set the mood for the book which is a reverent and beautiful example of art and printing.

*He Rides Beside You* is published by Stromberg Allen & Co., 430 South Clark Street, Chicago 5. Why not send a copy to some clergymen of your acquaintance—and buy one for yourself?

## A Time to Laugh

**P**EOPLE, generally, aren't opposed to humor—or think they aren't. In fact, the most unflattering thing you can say about a person is that he has no sense of humor.

But when some prominent person injects a little humor into an otherwise sober political speech, economic treatise or memo to the boss, it's undignified—maybe a bit indecent.

Oliver Wendell Holmes found that a sense of humor was a handicap to a doctor. Anybody who could find anything funny in the practice of medicine couldn't be trusted with a sick person. (Now, even the *Journal of the AMA* prints jokes.) In medicine, Holmes was far ahead of many of his contemporaries but he became famous through literature.

Lincoln was denounced for his homespun jokes by the stuffy purveyors of platitudes and hokum.

In our own time, the defeated candidate in the last two presidential elections was underrated by many of the voters because of his addiction to wisecracking. Of course, it makes a difference which side you're on.

A quip by a professional funny man is appreciated but one by a statesman is merely flippant. True, Churchill and FDR could be funny on occasion and get away with it—perhaps because they were not ordinary men. And their jokes were balanced by lofty and serious utterances.

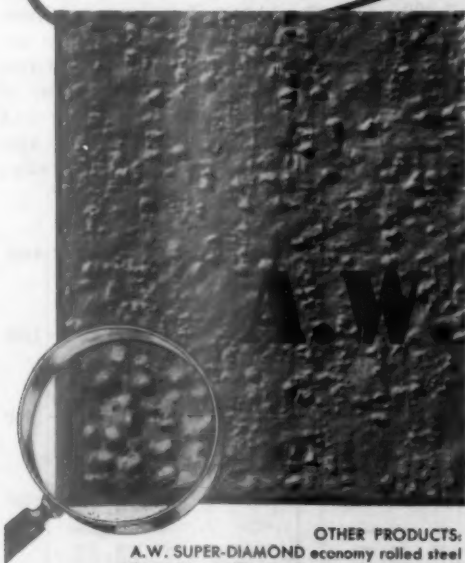
Using humor effectively requires good timing and a sensitiveness as to what constitutes good taste. Standards of good taste, however, are not clearly defined, and even an innocuous quip may offend somebody.

Of course, we should take our jobs seriously—though not ourselves. But it's so easy to get the two confused.

Carman Fish



**Ma'm'selle  
has not made the  
slip once, since  
she installed  
A. W. ALGRIP!**



**OTHER PRODUCTS:**  
A.W. SUPER-DIAMOND economy rolled steel  
floor plate—Plates—Hot and cold rolled  
sheet and strip—(Alloy and Special Grades)

Other slips... maybe, but never one on A.W. ALGRIP. Ma'm'selle has learned that A.W. ALGRIP won't slip... no matter how wet the surface. And if Ma'm'selle owned your plant, no doubt she would install A.W. ALGRIP... all ze way aroun'! There are many advantages. Yes, anywhere you install A.W. ALGRIP, you can forget about slippery surfaces. Hazardous slipping conditions disappear. Work efficiency increases while accident rates and insurance costs drop.

A.W. ALGRIP Rolled Steel Floor Plate is made by a patented process in which a grinding wheel type abrasive is rolled—not coated—to a controlled depth, as an integral part of tough steel plate. Wear merely exposes more abrasive... safety lasts for the life of the installation.

Check your plant for slipping hazards. A.W. ALGRIP provides super-safe footing under the most hazardous conditions—even on inclined surfaces. Send coupon for A.W. ALGRIP information, today.

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ALGRIP—approved for safety by Underwriters' Laboratories

**ALAN WOOD STEEL COMPANY**  
Conshohocken, Pa.

Please send A.W. ALGRIP Booklet AL-E27

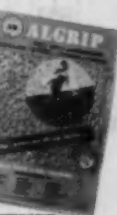
Name

Title

Company

Address

City  Zone  State



# THE ACCIDENT BAROMETER



Prepared by the Statistics Division,  
National Safety Council

ACCIDENTAL DEATHS in October totalled 8,100, an increase of 5 per cent over October, 1956. There were increases in deaths from public non-motor-vehicle and home accidents and no change in motor-vehicle and work accident deaths.

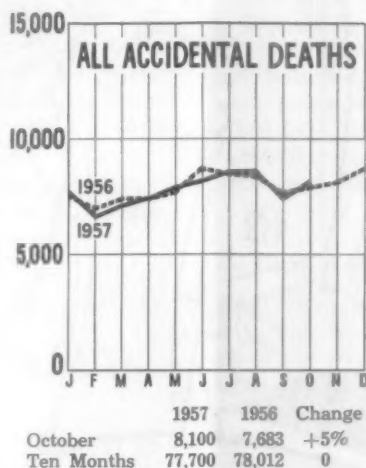
The total for 10 months was 77,700, a negligible change from 78,012 in 1956. Decreases in motor-vehicle and home accident fatalities were offset by increases in work and public non-motor-vehicle.

## Motor-Vehicle Deaths

The October total of motor-vehicle deaths was 3,480, about the same number as occurred in 1956. However, compared to 1955, it was a decrease of 11 per cent.

Deaths for the 10 months totalled 31,350, a reduction of 3 per cent from 1956. The 10-month death rate per 100,000,000 vehicle miles is not available at this time, but the 9-month rate was 5.7 or 7 per cent below 6.1 in 1956.

Of the 46 states reporting for 10 months, 20 had fewer deaths than in 1956, 2 had the same number and 24 had more deaths. Reporting cities with populations of more than 10,000 had a decrease of 6 per cent for October and 3 per cent for the 10-month period.



Regional changes from 1956 in the 10-month motor-vehicle death totals were:

North Atlantic	-2%
South Atlantic	-3%
North Central	-5%
South Central	-3%
Mountain	-7%
Pacific	-1%

## Work Accidents

There were approximately 1,300 deaths from work accidents in October, or no change from 1956. The 10-month death total was 12,200, an increase of 100 over 1956.

The October frequency rate per million man-hours in 18 sectional

accident prevention contests conducted by the National Safety Council was 5.00, a reduction of 8 per cent from October, 1956. The October rate for plants in community council contests was 5.14, no change from 1956. The 10-month rate in sectional contests was 5.31, down 5 per cent; in community council contests, the rate was 5.38, also down 5 per cent.

## Public Deaths

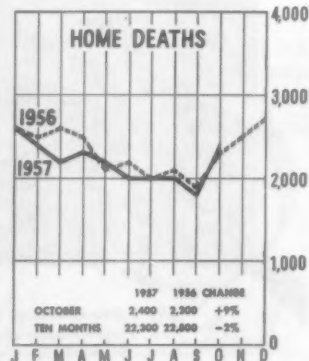
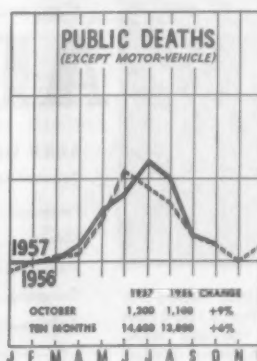
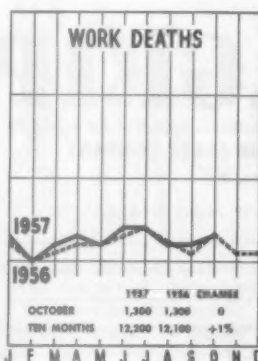
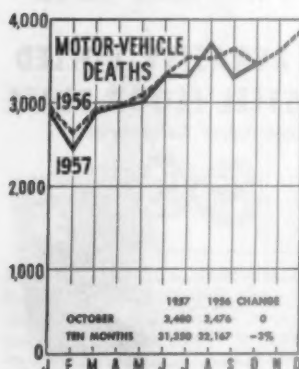
Deaths from public non-motor-vehicle accidents in October numbered 1,200, or 100 more than in 1956.

The 10-month death total was 14,600, an increase of 6 per cent over 1956. There were increases in deaths from burns, falls and drownings, a decrease in transportation accident fatalities, and no change in firearms accident deaths. Aside from a small reduction in deaths of young people 15 to 24 years old, all age groups showed increases over 1956 with the largest change recorded for persons 65 years and over.

## Home Deaths

October deaths from home accidents numbered approximately 2,400, or 9 per cent more than in 1956.

The January-October total was 22,300, a reduction of 2 per cent from 1956. Decreases were reported in deaths from burns, falls and poisonings and increases in mechanical suffocation and firearms accidents. Most of the reduction occurred among persons 25 to 44 years old but deaths of persons 65 years and over and children under 5 years old also were fewer. Other age groups showed increases over 1956.





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## Quality Cleaning Stations



Magic Silicone Lens Tissue:  
America's Leading Eye-Aid for  
Safety

Magic Heavy-Duty Cleaning  
Station: Science's Answer to  
Grit, Fog and Grime

**MAGIC SILICONE LENS TISSUE** the highest quality, first-class sheet of Silicone-treated tissue made in our country; marvel of the paper-makers art; finest quality to be found in the world.

It exceeds every specification for scientific use under most exacting conditions where super-quality-softness, no lint and Silicone treatment is required as in atomic laboratories, etc. It deposits a protective film of sparkling Silicone on lenses. Science's answer to foul sight.

No glossy surface to prevent absorption of oil and oil mists from lens. It polishes and protects as it cleans instantly. Crystal-clear. Size and tearing strength are elements of quality. So, each sheet is over 50% larger than usual and has twice the tearing strength. **YET MAGIC TISSUE COSTS YOU LESS.**

Quality carries through to the Dispenser. Made of strong 20 gauge steel, indestructible. No moving parts. Self-mounting—just stick it to the wall.

**MAGIC HEAVY DUTY Cleaning Station** is for grimy areas where washing with a fluid is unavoidable, or where Anti-Fogging treatment is required, or for use on plastics or any eyewear.

**MAGIC Cleaning & Anti-Fogging Fluid** is combined; a two-in-one triumph. It's pressure-packed. Touch the top and Presto! The can does the rest. Nothing to refill. Each can will clean about 360 glasses, whereas old-fashioned 6-oz. bottles clean only about 100. Or, if you wish to use your own home-made fluid, we can supply our adapter (\$2.70) with a giant 16-oz. bottle and plunger complete.

The Heavy Duty Paper is our superb, super-strong, wet-strength sheet. No scratching on plastic, and no lint. These sheets are inter-folded and are released one by one, not in bunches, also reducing waste. The **MAGIC** watchword **Quality**. Order Now! Wire or write us or your safety jobber today.

Magic Silicone Lens Tissue.....per carton	\$8.40
(6 (800 sheet) refills per carton)	
Magic Lens Tissue Dispenser.....each	2.50
Magic Heavy Duty Dispenser.....each	5.95
Cleaning & Anti-Fogging Fluid	
(Twelve 12 oz. cans) per carton	12.50
Magic Heavy-Duty Paper.....per carton	11.60
(18 giant refills (760 Sheet))	
Magic Heavy Duty Units.....each	7.65
(Dispenser, 1 can Fluid, 1 packet paper)	

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Circle Item No. 5—Reader Service Card

# Can you tell a killer

Read the true story in these aluminum bars of how well safety hats protect you from lethal overhead blows. These actual plates were used in recent laboratory *field type* tests of all safety hats available. Can you recognize the marks of killing blows?

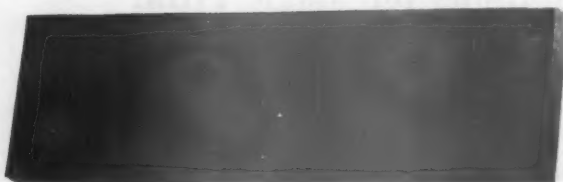
The deeper the depression . . . the lower the safety margin. See how Bullard outperforms all others . . . in fact, gives you 33% better protection . . . when compared in *field type* tests!

## ONLY ONE TRUE MEASURE OF SAFETY HAT PERFORMANCE—"FIELD TYPE TESTS"

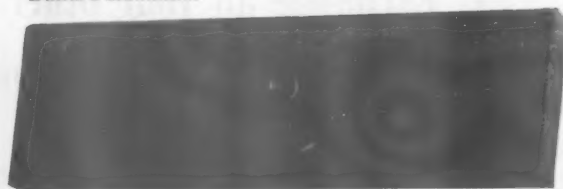
For years manufacturers have been content to test hats under the artificial laboratory conditions. Bullard engineers conducting these tests have gone one step further. They have removed the one condition in the standard specifications that makes conventional test results exaggerated and unrealistic!



*Bullard fiber glass*

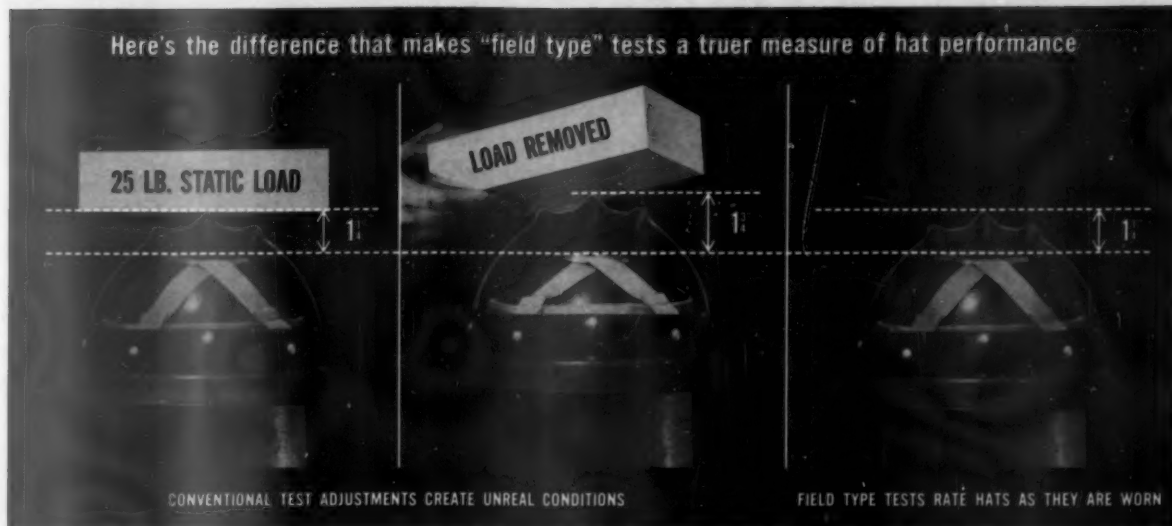


*Bullard aluminum*



# by his tracks?

Here's the difference that makes "field type" tests a truer measure of hat performance



Standard specifications for adjusting crown clearance—distance between top of inside shell and top of test block—make current testing methods unrealistic. Crown clearance measurement in these tests is made with a 25 lb. static load on top of the hat. Of course, when the static load is removed, the shell of

the hat pops up, giving crown clearance of as much as  $1\frac{3}{4}$ ". You know that men in the field do not wear hats this high . . . they are uncomfortable and may be blown or knocked off too easily . . . they wear them low—close to their heads.

In the tests reported field conditions are more closely approximated. Hats have been adjusted to a  $1\frac{1}{4}$ " crown clearance without the use of a static load. When the advantage of this extra crown clearance is taken away, see what a different picture you get of safety hat performance . . .

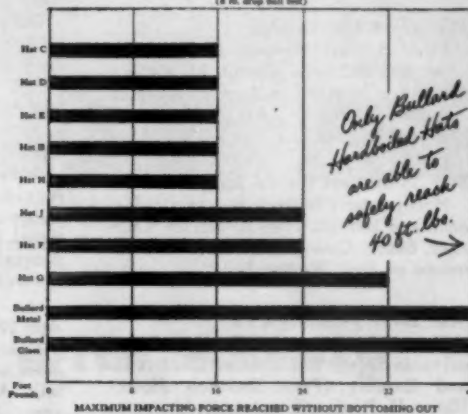


**E. D. BULLARD COMPANY**

Sausalito, California

WRITE FOR SUMMARIZED TEST REPORTS #B1-R6

HELMET COMPARATIVE IMPACT PERFORMANCE DATA  
FIELD TYPE TESTS  
(6 lb. drop ball test)



Bullard Safety Hats and Caps are available in fiber glass or aluminum in a wide choice of colors.



### Feb. 6-7, San Francisco

Eighth Annual California Statewide Meeting of the Governor's Industrial Safety Conference (Fairmont Hotel). A. C. Blackman, chief, Division of Industrial Safety, California Department of Industrial Relations, 910 Mission St., San Francisco 3.

### Mar. 2-4, Memphis, Tenn.

Southern Safety Conference and Exposition, (Peabody Hotel). W. L. Groth, executive director, Southern Safety Conference, Inc., P. O. Box 8927, Richmond 25, Va.

### Mar. 4-5, Boise, Idaho

Idaho Governor's Safety Conference (Hotel Boise), Boise, Idaho.

### Mar. 5-6, Philadelphia

Annual Regional Safety and Fire Conference and Exhibit of the Philadelphia Safety Council (Bellevue-Stratford Hotel). Harry H. Verdier, executive director, Philadelphia Safety Council, Chamber of Commerce Bldg., 121 S. Broad St., Philadelphia 7.

### Mar. 16-19, Dallas, Tex.

Nineteenth Annual Texas Safety Conference (Adolphus Hotel). J. O. Musick, general manager, Texas Safety Association, Inc., 830 Littlefield Bldg. Austin, Tex.

### Mar. 17-18, Boston

Thirty-seventh Annual Massachusetts Safety Conference and Exhibit (Hotel Statler). Bert R. Harmon, assistant manager, Massachusetts Safety Council, 31 State St., Boston 9.

### Mar. 17-19, Los Angeles

Fifth Annual Western Safety Congress and Exhibits. Joseph M. Kaplan, manager, Greater Los Angeles Chapter, National Safety Council, 3388 W. 8th St., Los Angeles 5.

### Mar. 18-19, Fort Wayne, Ind.

Northeastern Indiana Safety Conference and Exhibit. Ivan A. Martin, manager, Safety Council, Chamber of Commerce of Fort Wayne, Ind.

### Mar. 25-27, Pittsburgh, Pa.

Thirty-third Annual Western Pennsylvania Safety Engineering Conference and Exhibit (Penn-Sheraton Hotel). Harry H. Brainerd, executive manager, Western Pennsylvania Safety Council, Inc., 605 Park Bldg., Pittsburgh 22, Pa.

### Mar. 25-28, Washington, D. C.

President's Conference on Occupational Safety. Director, Bureau of Labor Standards, Department of Labor, Washington 25, D. C.

### Apr. 9-11, Gainesville, Fla.

Fifth Annual Conference on Accident Prevention Engineering (University of Florida). Donald B. Wilcox, conference coordinator, Department of Industrial

# COMING EVENTS



in the  
safety field

Engineering, University of Florida, Gainesville, Fla.

### Apr. 9-11, St. Louis, Mo.

Central States Safety Conference (Hotel Chase). Wm. F. Yorger, managing director, Safety Council of Greater St. Louis, 722 Chestnut St., Suite 321, St. Louis 1, Mo.

### Apr. 14-18, New York

Twenty-eighth Annual Safety Convention and Exposition of the Greater New York Safety Council (Hotel Statler). Paul F. Stricker, executive vice-president, 60 E. 42nd St., New York 17.

### Apr. 15-17, Detroit, Mich.

Twenty-eighth Annual Michigan Safety Conference (Sheraton Cadillac Hotel). Ben Duguid, executive secretary, 16130 Northland Dr., Detroit 35, Mich.

### Apr. 16-17, Indianapolis, Ind.

Eleventh Central Indiana Safety Conference and Exhibit. (Claypool Hotel). Jack E. Gunnell, director, Indianapolis Safety Council, Chamber of Commerce, Indianapolis, Ind.

### Apr. 21-22, Toronto, Ont.

Annual Conference of the Industrial Accident Prevention Associations (Queen Elizabeth Bldg., Canadian National Exhibition). R. G. D. Anderson, general manager, IAPA, 90 Harbour St., Toronto 1, Ont.

### Apr. 22-24, Columbus, Ohio

Twenty-eighth All-Ohio Safety Congress and Exhibit (Deshler-Hilton Hotel). Arthur W. Moon, congress manager, Room 611, Ohio Dept. Bldg., Columbus 15, Ohio.

### May 1-3, Richmond, Va.

Annual Conference of Virginia Safety Association (Monticello Hotel). James T. Wadkins, manager, 2501 Monument Ave., Richmond, Va.

### May 5-7, Allentown, Bethlehem, Easton, Pa.

Thirty-first Eastern Pennsylvania Safety Conference. Harold E. Seward, Lehigh Valley Safety Council, 602 E. 3rd St., Bethlehem, Pa.

### May 6-8, Buffalo, N.Y.

Eighteenth Western New York Safety Conference and Exhibit (Hotel Statler). Clifford H. Seymour, executive secretary, P.O. Box 315, Niagara Falls, N. Y.

### May 7-8, Cedar Rapids, Iowa

Fifth Annual Safety Conference of the Industrial Safety Association of Iowa (Sheraton-Montrose Hotel). Pegge Resch, executive secretary, 611 Central National Bldg., Des Moines, Iowa.

### May 8-9, Baltimore, Md.

Governor's Annual Safety-Health Conference and Exhibit (Lord Baltimore Hotel). Joseph A. Haller, executive chairman, Department of Labor and Industry, 12 E. Mulberry St., Baltimore 2, Md.

### May 14-16, Asheville, N. C.

Twenty-eighth Annual North Carolina Statewide Industrial Safety Conference (Battery Park Hotel). H. S. Baucom, director of safety, North Carolina Industrial Commission, Raleigh, N. C.

### May 20-21, Louisville, Ky.

Kentuckiana Safety Conference and Exhibit, (Kentucky Hotel). Estel Hack, executive vice-president, Louisville Safety Council, 214 Speed Bldg., Louisville 2, Ky.

### June 9-12, Cleveland, Ohio

Eighth National Materials Handling Exposition (Public Auditorium). Clapp & Poliak, Inc., Exposition Management, 341 Madison Ave., New York.

### June 11-12, Bridgeport, Conn.

Thirteenth Annual Connecticut Safety Conference (Stratfield Hotel). Sponsored by the Connecticut Council, A. V. Short, publicity director, 15 King St., Wallingford, Conn.

### Sept. 16-18, Cleveland, Ohio

Twentieth Annual Safety Conference (Pick-Carter Hotel). H.G.J. Hayes, secretary-treasurer, Ohio State Safety Council, 8 E. Chestnut St., Columbus 15, Ohio.

### Sept. 18-19, Rockland, Maine

Thirty-first Annual Maine State Safety Conference (Samoset Hotel). Arthur F. Minchin, secretary, Department of Labor and Industry, State House, Augusta, Maine.

### Oct. 20-24, Chicago

Forty-sixth National Safety Congress and Exposition (Conrad Hilton Hotel). R. L. Forney, secretary, National Safety Council, 425 N. Michigan Ave., Chicago 11.

### Nov. 30-Dec. 5, New York

American Society of Mechanical Engineers, Annual Meeting. (Statler and Sheraton-McAlpin Hotels). ASME, 29 West 39th St., New York 18.





In carrier landings, planes coming in at more than 100 knots are stopped in a split second. This amazing performance is made possible by having each plane hook onto one of several wire ropes stretched across the flight deck. Both plane and rope receive an almost unbelievable shock at the moment of contact. Needless to say, only top-quality wire ropes can be used for this application because . . .

## you can't bargain with safety

While your use of wire rope differs from this carrier application, *safety should be just as important to you.* For, although a "bargain" rope may save you money, it can cost you your peace of mind. So don't bargain with safety. Buy a rope that's a *quality* rope—buy Wickwire Rope.

5049



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New York • Philadelphia

Circle Item No. 7—Reader Service Card

# CONSULTATION CORNER

By L. C. Smith, Industrial Department, NSC

Got a problem in accident prevention or occupational hygiene? Questions are answered by mail, a few of general interest being selected for publication here

## Seat Belts for Fork Lift Trucks?

**Question:** What is your recommendation on the use of seat belts on equipment such as fork lift trucks?

**Answer:** Seat belts have proved to be an excellent safety feature in automobiles, but we feel plant trucks present an entirely different problem. This problem has been discussed with a number of people and they all question the merits of seat belts for plant trucks.

The principal purpose of a seat belt in an automobile is to prevent the occupants from being thrown forward or out of the car in the event of a collision. This factor does not seem to apply to any great extent with regard to a plant truck. Such trucks operate at relatively low speeds and in the event of a collision it is not likely the operator would be thrown from the seat.

In most of the injury reports we receive involving plant trucks, a seat belt would likely have been more a hindrance than a help. In most cases it is important for the operator to be free to jump or fall clear rather than to be strapped to the seat. Consider the cases where a truck runs off a loading dock or other elevation. In these cases, if the operator were held in by a belt he would be more likely to be crushed by the truck or against some object that the truck might fall against.

Somewhat parallel is the situation regarding farm tractors. Here, however, the greatest hazard is rollover, and a good deal of effort has been expended in the direction of designing a rollover guard which would completely prevent the tractor from rolling over backward or sidewise onto the opera-

tor. Use of a seat belt is recommended on a farm tractor provided with a rollover guard. However, most agricultural safety experts do not recommend seat belts without the rollover guard. Again the same reason applies: in the event of an upset, the operator is in a better position to jump clear if he does not have a seat belt.

Another important item should be considered. Operators of plant trucks frequently have to dismount and get back on the truck again many times during their shift. Rather than buckle and fasten the seat belt each time, they would probably not use it at all.

## Lead Concentration in Indoor Firing Ranges

**Question:** Is there a possibility of having high lead concentrations in an indoor firing range? This

problem came up since several members of our safety department are in rifle clubs.

**Answer:** Yes. Concentrations of as much as 1.3 milligrams of lead per cubic meter of air have been observed. Air samples taken in the "breathing zone" of the people on the firing line have indicated lead concentrations several times the amount recommended for a continuous industrial exposure.

The maximum permissible concentration of lead in an industrial atmosphere has been set at 0.15 milligrams per cubic meter. In other words, if a workman were to spend 8 hours a day, 40 hours a week, for 40 years in an atmosphere containing 0.15 milligrams of lead per cubic meter of air, there would be no demonstrable effects on his health from this exposure.

It is debatable whether or not a concentration of six to ten times the maximum allowable concentration would be harmful under the conditions observed at an indoor shooting range. The average person at work breathes about ten cubic meters of air in eight hours. At this rate, and working in a maximum permissible level of lead contamination, he would ingest 10 times 0.15 milligrams of lead or a total of 1.5 milligrams per day.

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**SEAT BELTS** are desirable for automobiles but not for fork trucks. Trucks operate at low speeds and in most accidents it would be better for the operator to be able to jump or fall clear.

## Reinforced protection where it's needed most—in the DANGER ZONE

This is an exclusive M-S-A® Skullgard feature. The dotted line around the Skullgard at right, bounds the *danger zone* . . . the front, top, and back areas of a hat that working positions expose most often to impact. Extra protection in this danger zone area, is the result of new high-pressure molding techniques, better materials, improved production methods. And, it's added protection without added weight. Get the facts on this important MSA development. Write us for further information.



MSA has prepared a unique visual aid to illustrate the principle of the Skullgard's reinforced protection. The MSA man will be glad to show you this series of 8 protective laminations.



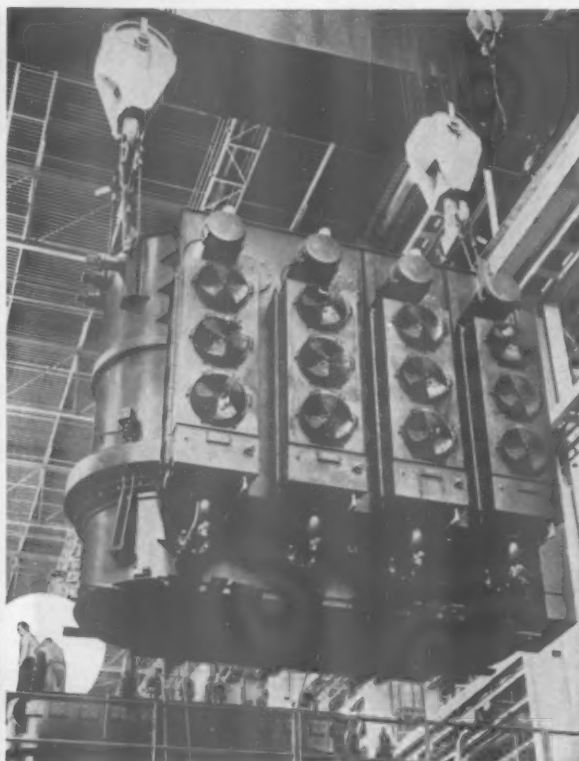
**MINE SAFETY APPLIANCES COMPANY**

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**ACCO**for Better  
Values

## Acco Registered® Slings—Chain or Wire Rope



### Why different loads require different slings

Your rigger knows that different loads need different slings because of varying factors such as shape, weight, material, finish, protruding sharp corners, extremes of temperature.

On some jobs chain is best. On others the characteristics of wire rope make it the first choice. On still other jobs, wise riggers know that combinations of chain and wire rope will provide the greatest lifting economy.

No matter what type is called for, you can be sure of the safest slings and the best values in ACCO Registered Slings. From this one source you can get unbiased information based on actual know-how.



And you can get the exact slings your rigger should have.

One of the recent improvements is the new shaped Master Link now provided without extra cost on all ACCO Registered Slings, chain or wire rope. This link gives 18% greater resistance to distortion with no increase in weight. It is another reason why ACCO Registered Slings are recognized as the standard of efficiency and safety.

All ACCO Registered Slings are proof-tested, registered and identified for your greater assurance of safety.

...

Tell your distributor you'd prefer ACCO Registered Slings.

#### WHAT "ACCO REGISTERED" MEANS

- 1 The best material
- 2 Unit safety factor (on bodies, rings, links, hooks)
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Circle Item No. 9—Reader Service Card

**ACCO**



# WIRE FROM WASHINGTON



By Harry N. Rosenfield  
Washington Counsel, National Safety Council

**THE RECONVENING** of Congress, and the presentation of major Administration programs and proposals for dealing with the nation's safety in its broadest connotations, were the dominating influences in the Washington scene.

**The President.** In his Budget Message to the Congress, the President dealt with the financial aspects of the Administration's program proposals to the Congress. Safety considerations were included, in one way or another, in many of these, such as: anticipated 10 per cent increase in the number of safety surveys of carriers' operations by the Interstate Commerce Commission, and in the number of motor carriers inspected; 10 per cent increase requested for the Civil Aeronautics Board's activities, and an anticipated 8 per cent increase in completed safety proceedings; more than double increase in funds for the Airways Modernization Board; increase of funds to Atomic Energy Commission "to explore more fully the problems inherent in radioactive hazards"; and continuation of the Public Health Service's research program to determine the cause and extent of accidents and to develop techniques for their prevention.

**National Health Survey.** The Surgeon General of the U. S. Public Health Service released the results of the first quarter-year sampling of the National Health Survey, for the period July-September, 1957. In these three months, 14 million persons suffered accidents which either disabled them or required medical care or both. These do not include the immediately fatal accidents. Motor vehicles accounted

for 8 per cent of these non-fatal accidents; of the reported accidents, 17 per cent occurred on the job, and 45 per cent in the home. The Surgeon General called for "concerted action," and for "faith, friendship and teamwork in a common effort" of "all the nation's leadership groups" to cope with the "still staggering . . . toll of accidents."

**Industrial Safety.** The U. S. Bureau of Mines released preliminary injury-frequency data for 1956, for production and development employees in the mineral extractive industries. The rate (fatal and nonfatal combined) per million man-hours of exposure was 24.88, or a decline of 3 per cent from the comparable rate of 25.73 in 1955. (Of the 8 industry groups involved, 6 showed an improvement, and 2 the contrary.) The fatality rate for all mineral industry groups in 1956 was 0.45 per million man-hours, an increase of 7 per cent over the 1955 rate of 0.42. (In this category, 5 of the industry groups showed an increase in fatality rate, 2 showed a decrease, and one remained the same.) The frequency of nonfatal injuries declined 3 per cent.

The Atomic Energy Commission approved new maximum radiation exposure limits recommended by the intergovernmental National Committee on Radiation Protection and Measurement. The new maximums are only one-third of those previously allowed. Although they apply only to the AEC's own facilities and to those of its contractors, AEC plans to extend the standards later to private companies licensed to use radioactive materials. Two of the basic changes are: (1) reduction of the total radiation dose any in-

dividual may accumulate, beyond the age of 18, to an average of 5 rems (roentgen equivalent man) per year and not more than 15 rems in any one year; and (2) reduction to one-third in connection with radioactive materials which tend to get into and remain in the human body or be concentrated near the reproductive organs.

For the first time, AEC attempted to limit radiation exposure of the population as a whole, outside of its facilities or those of its contractors, by adopting a requirement that its industrial operations must not release any radiation which might be expected to expose the population to an average whole body dosage exceeding 0.5 rem per year. Thus, the average radiation exposure for the general population is one-tenth of the maximum concentration permitted for workers in atomic energy facilities.

The AEC also announced that it was cooperating with Great Britain in studies of a British nuclear installation accident. Among the items being analyzed are reactor safety factors, and the off-site aspects of the accident including public health problems.

The International Labor Organization received a report from a group of experts as to measures for protecting workers against radiation. Stress was laid on the need for adequate education of workers in such protection. The experts recommended revisions in the radiation chapter of the Model Code on Safety Regulations for Industrial Establishments, especially in connection with luminizing operations and work with unsealed radioactive materials. The Committee recommended further ILO consideration of: (1) the specific industrial hygiene problems

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**URANIUM RODS** reach Continental Oil Company's atomic radiation laboratory at Ponca City in a 13-ton lead casket. Men are about to lower casket into an 18-ft. well where the 10-lb. rods are removed in preparation for experiments. Man in foreground is taking a radiation reading with a count rate meter.

## OIL AND THE ATOM

**Radioactivity is aiding creation of new products and processes and improvement of old ones in petroleum and petrochemical industries**

**N**UCLEAR RADIATION will be used in experiments designed to create new petroleum or petrochemical products and processes and improve existing ones in the new atomic radiation laboratory of the Continental Oil Company at Ponca City, Okla.

For several years Conoco has

been engaged in radiation research. During the past two years the company has been conducting studies at the University of Michigan and for several years has been using radioactive piston rings for studying engine wear. Radioactive isotopes are being used currently in other research

projects and at the Ponca City refinery to indicate liquid levels.

At the new laboratory radio-tracing will open the door to countless new studies of the reactions of carbon and hydrogen, the principal elements in petroleum. By tagging an atom—making it radioactive—it is possible to



**RADIATION CHECK.** Chemist J. K. Garland uses count rate meter to check hands and clothing for radioactivity before leaving building. This is one of many requirements followed by staff in atomic research unit.

trace the flow of liquids through pipes or oil formations. It will provide more information about how greases and oils lubricate, how oil is recovered in a producing oil field, and how wear and corrosion occur in engines and oil field equipment.

**Sources of radiation.** Nuclear radiation used for studies at the new unit is being supplied by fuel

elements in 10-lb. uranium cylinders or rods shipped to Ponca City from the Atomic Energy Commission's plant and atomic reactors at Arco, Idaho. Four 2-ft. uranium rods, all encased in a protective 13-ton lead casket, recently arrived at the laboratory and are now in use.

The principal radiation in the uranium rods used in the research

unit is the gamma ray, similar to the X ray but more penetrating. Other types in the rods include alpha and beta rays which are less penetrating than the gamma rays.

The rods are expected to last four to six months. By that time they will have lost about three-fourths of their original energy or penetrating power and will be

## Council Offers Radiation Safety Course

**DURING THE WEEK** of March 31—April 4, the National Safety Council will conduct a course in radiation safety as it pertains to industrial safety men.

The course, which will be held at the Council's headquarters in Chicago, will include practical work at Argonne National Laboratory.

Among the topics covered will be the use and safe handling of radioisotopes, monitoring of radioactive substances and decontamination procedures in case of spills. At Argonne, students will have an opportunity to work with radiation detection instruments and participate in an air sampling problem.

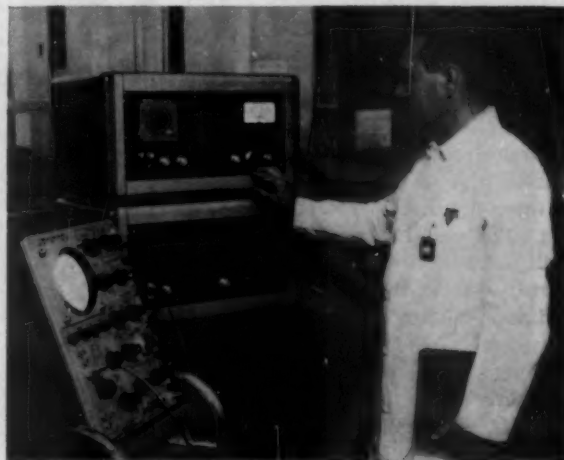
Instructors for the course will be staff members of the Council, the Argonne National Laboratory, and the Atomic Energy Commission.

Those interested in the course should write the Director of Industrial Training, National Safety Council, 425 North Michigan Ave., Chicago 11. The class will be limited to 20.



**INSIDE LOOK.** Operator outside hot cell works mechanical hands mounted on hot cell wall. Hands inside hot cell can be seen transferring chemical solutions from one test tube to another. Radiation resistant glass which separates hot cell from operating area is 4 ft. thick.

**RADIOTRACER STUDIES.** Preston Grant, head of radiotracing section of Conoco's atomic radiation laboratory, studies oscilloscope and hydrogen 3 counter. Radiotracing, by making atoms radioactive, will make possible new studies of hydrogen and carbon, the main elements in petroleum.



replaced from time to time by others from the atomic reactors at Arco.

The Conoco radiation unit, which was built adjacent to the company's research pilot plant, is among the first in the country to use fuel elements as a source of atomic radiation.

**Safety standards.** The laboratory's safeguards far exceed the

demineralized water which is purified constantly by a recirculation system. When in use, the rods are elevated to the hot cell by remote control. Some experiments may be conducted under water.

Scientists in the operations room just outside the hot cell manipulate equipment in the cell area remotely by using long, robot-like mechanical hands

mounted in the walls. Working as a team, the hands outside the cell can direct the hands inside the cell in such detailed work as tightening a bolt, penciling identification on a glass, or exchanging chemical solutions from test tube to test tube.

A closed circuit television camera in a cell enables scientists to view interior operations on a

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**PERISCOPING.** Chemist W. H. Snavelly views hot cell area through periscope while manipulating the mechanical hands.

Periscope affords a close-up of any part of hot cell.

**PROTECTION PLUS.** Dr. O. D. Steffey, biologist and health physicist, is shown with an array of instruments used for checking radiation in air and on equipment and clothing. Devices include portable survey meter for checking alpha, beta, and gamma radiation in general areas and on table tops; count rate meter for checking radiation exposure; Geiger counter and scaler for measuring radiation in air, and a dosimeter. Dr. Steffey is wearing a pen-like instrument in his coat pocket which registers total radiation and will be checked regularly in the dosimeter. Film badge on lapel and symbolic radiation sign at left are other safety tools.

standards set by the Atomic Energy Commission which specify that a person should not get more than 3/10 roentgen of radioactive exposure in one week. It is estimated that the men working in the laboratory will not get 3/10 roentgen in one year.

Work in the laboratory includes both gamma radiation research and radiotracer studies. Gamma radiation research is being conducted in a small "hot cell" with in the functionally designed building. The cell has a shielding or wall of specially prepared concrete, 5½ ft. thick, with two radiation-resistant lead glass windows, each 4½ ft. thick.

When not in use the radioactive rods are stored at the bottom of an 18-ft. well beneath the hot cell. The well holds 19,500 gallons of





**These drivers are prepared to change a tire or render first aid to the motorist in distress**

**M**ANY A motorist stranded on an Ontario highway has blessed a big red truck bearing the name of "John Labatt, Limited," whose friendly driver changed a tire, rendered emergency first-aid service, summoned assistance, or performed some other service.

For more than 20 years drivers of Labatt trucks and company cars have been making themselves useful to troubled motorists. This large London, Ontario, brewery has won an inestimable amount of good will through its continuing program of emergency assistance to highway travelers.

Each Labatt driver is a trained first aider and each truck and company car carries a complete first aid kit with an assortment of bandages, splints and other items designed to meet typical motoring emergencies. These kits contain supplies in individual packages to keep them clean and uncontaminated until applied to the injury. This is particularly important in the treatment of injuries in locations where the facilities of a dispensary are not available.

In addition to the good will created by these services, company officials feel that their safety program has been aided. The constant emphasis this program puts on motoring safety has greatly improved the driving of their own operators and helped to minimize accidents and breakdowns involving company vehicles.

To maintain the effectiveness of this program, all Labatt drivers are given an intensive first-aid training course in which they practice treating simulated injuries.

Safe driving instruction is also included and each driver must  
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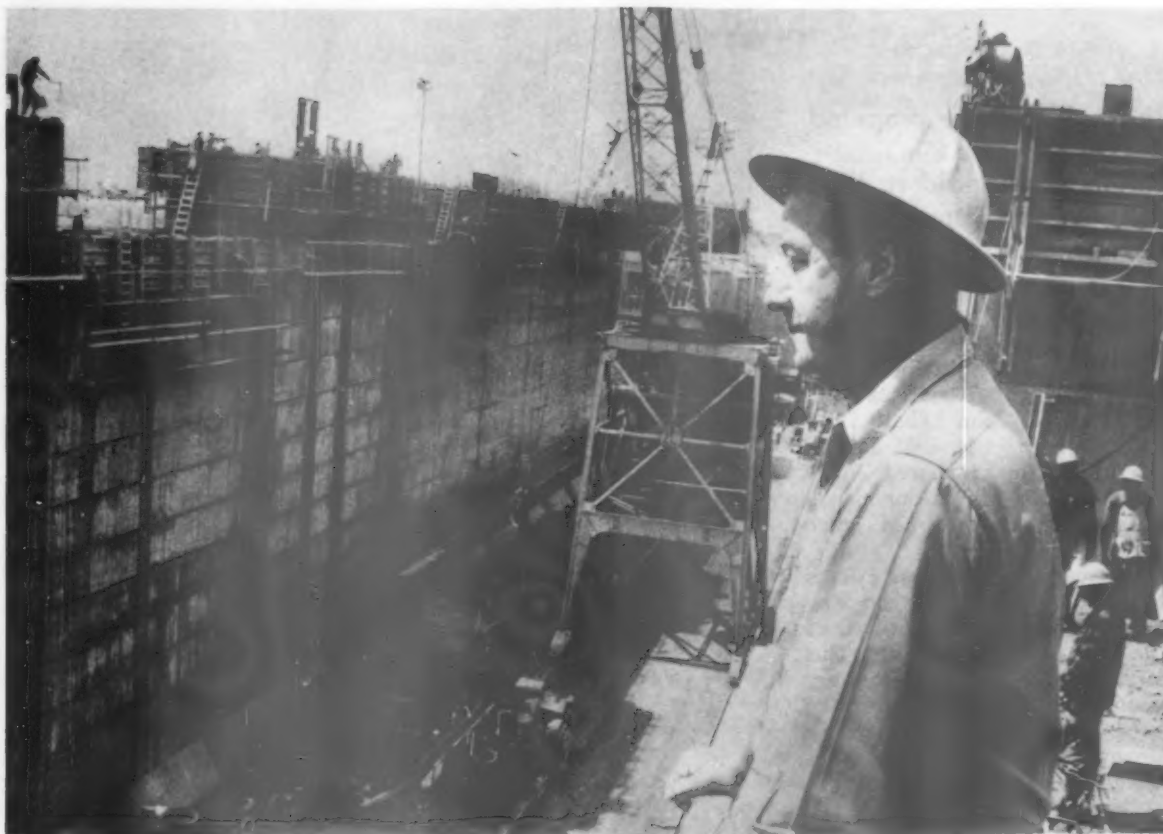


**DRIVERS** of John Labatt Limited vehicles receive practical first-aid instruction that prepares them to provide emergency treatment.

## Good Samaritans of the Ontario Highways



**PERIODIC** first-aid refresher courses keep drivers prepared to help injured motorists. Films and slides are used.



## Man-Made Seacoast

**With the Great Lakes, the St. Lawrence Seaway forms an "Eighth Sea." Here is the safety story of construction of an important link in that vast international navigation and power project—the Grasse River Lock**

**O**NE OF THE biggest concentrated construction projects of all time, the billion-dollar St. Lawrence project is unique in construction history for several reasons.

One is the large number of national and international organizations involved. These include the Power Authority of the State of New York, the Hydroelectrical Commission of Ontario, the St. Lawrence Development Corporation (a federal agency), and the U.S. Army Corps of Engineers.

More than 70 contractors, and about twice that many subcontractors, have been in operation at one time. About \$80 million worth

of construction equipment and 17,000 workmen have been working around the clock to complete the project.

From a safety standpoint, several factors are important:

- Fast construction schedule.
- Large number of workmen required in short time.
- Relatively inexperienced heavy construction workers.
- Hazard of work in controlling the 250,000 cubic feet per second flow of the St. Lawrence River.
- Safety "written in" construction contracts.

Since the power portion of the project was financed through the

sale of bonds to private investors and since there is a need and a market for power as soon as it can be produced, that portion was scheduled for the earliest practical completion date. This meant pushing all work around the clock and through the hazardous winter seasons. Organizations were under pressure to get the job done.

With the fast start and the large number of contracts under way, it was difficult to man the jobs with experienced labor. Although the unions and the contractors did a herculean job in finally getting workers from all over the country, the carpenter reporting for work with a new pair of overalls, a new

**GRASSE RIVER LOCK** is 800 ft. long, 80 ft. wide. Some 376,000 cu. yds. of concrete, 3,300 tons of steel were used.

hammer, and a meat saw was not fictional.

This problem made necessary additional efforts to teach men how to perform their jobs and to observe safety practices. Discipline presented another problem, for a workman dismissed for safety infractions on one job could (initially) immediately get employment on another.

Moving the large flow of the St. Lawrence River around to accomplish the construction presented hazards not usually encountered. The fast currents and the large, constant flow of the river required never-ending vigilance against the hazard of drowning. Life jackets were mandatory on all operations over water. Winter work at the river added the hazard of floating, grinding ice.

The specifications for the Power Authority of the State of New York covered several points in connection with safety:

1. Adequate first-aid equipment and facilities must be provided.
2. Every accident to persons or damage to property must be reported in writing.

**DOUBLE LADDERS** on the Grasse River Lock project prevent passing.



3. The contractor must comply with the provisions of the booklet, *Safety Requirements*, a publication of the U.S. Army Corps of Engineers which is recognized as an excellent guide on heavy construction.

4. A full-time, qualified safety engineer will be employed.

Other organizations had similar provisions, thus recognizing that the owner, as well as the builder, has a moral obligation for the workman's welfare. Further, these specifications reflect the conviction that a safe job is the most economical job.

The engineers for the Power Authority, as well as other or-

ganizations, instigated aggressive, positive safety programs. One of the most successful of these is still being carried out by the contractor on the Grasse River Lock project near Massena, N. Y.

The Perini Corporation, sponsor of the project, has developed what it believes is a unique method of keeping a finger to the pulse of safety observances on the job. Working with union representatives on the job and the counsel of its insurance carrier, Employers Mutuals of Wausau, the company has set up a "watch-dog" committee. This group is

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**SAFETY BAR** at base of Gantry crane keeps men from ducking under crane while it's in motion. Joe Huntman (right), accident prevention engineer for Employers Mutuals of Wausau, once saw a man cut in two trying this.



**ON-THE-JOB** safety conference finds Otto Holmskog (left), construction safety specialist for Employers Mutuals of Wausau, and Lou Perini (center), president of the Perini Corporation, consulting with Ivan Duprey, one of eight union stewards on the "watchdog" committee.



## UNDER ONE ROOF



**EACH BENCH** in this wiring area has its own system of ventilating ducts leading from the soldering pots to the roof. Worker is wiring dial telephone equipment banks.



**CLEAR GLAZED** wall tile extends from the terrazzo floors to the metal acoustic ceilings throughout the medical department. Department includes convenient waiting area for employees.

Many operating problems  
—including accident control  
—were simplified when the  
company moved from 17  
old buildings into one new  
integrated plant

**C**ONTROL of accidents, like control of everything else, is more difficult where operations are spread over large areas.

So you can imagine the delight of the safety department of Automatic Electric Company when AEC moved recently from its 17-building complex near Chicago's Loop to a new 1,520,000 square foot integrated plant in suburban Northlake.

Previously, operations were scattered over 75 floors in numerous buildings. Now manufacturing, office and research are all located under one roof in the new plant designed and erected by the Austin Company.

The physical transfer of manufacturing operations to the 167-acre site, formerly occupied by a golf course, was the largest single industrial moving job in Chicago's history. In the new plant all han-



dling, processing, storage, assembly and shipping operations are arranged in an orderly, straight-line sequence. Everything moves in more or less parallel lines from receiving area to finished stores, packing and shipping department.

With thousands of manufacturing employees under one roof and members of the office, research and administrative staff at work in modern office space directly adjacent to the factory, Automatic Electric has achieved real unity of operations.

The largest manufacturer of equipment for America's independent telephone companies, Automatic Electric was organized in Chicago in 1901 and became a member of the General Telephone System in 1955.

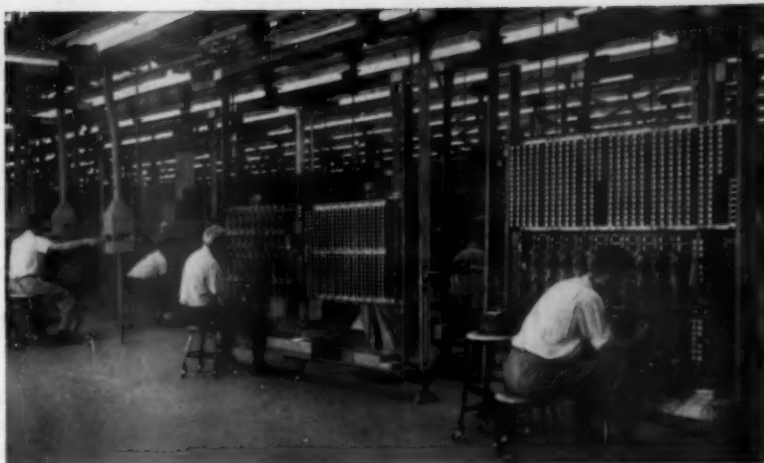
AEC is the successor of the Strowger Automatic Telephone Exchange, which was the originator of the dial telephone in 1892. Some of the contributions of the company to the progress of telephonics are the unattended automatic exchanges, call indicator systems, handset telephones, automatic toll boards and automatic toll ticketing for nationwide distance dialing, loud-speaking telephones and automatic teletypewriter switching. The company is also a pioneer in the field of automation and electrical control systems.

Today AEC produces telephone type relays, stepping switches, remote control systems, and many specialized devices used in computers, guided missiles, aircraft control systems, radio and television, photoelectric measurement and control systems.

The new manufacturing building has been built without partitions except for fire walls which separate the receiving and processing departments from the central stores and assembly area, and those required to isolate special processes and the shipping area.

The plant has columns spaced 40 feet apart in bays that are 60 feet wide. With 60 x 60-foot transverse craneways bays in the receiving and shipping areas, the flat-roofed, steel-framed factory structure possesses an inherent

—To page 126



**FINAL ASSEMBLY** and testing operations on automatic dial telephone switchboard panels. Panels move toward the shipping area on special conveyor frames



**MAIN CAFETERIA** seats 1,400. There are six separate service counters, two on each of three sides of the kitchen. Mezzanine cafeteria seats 700.



**SPACIOUS WORKING AREAS** and excellent illumination in this coil winding department are typical of conditions throughout the plant. Note plastic eye protection worn by employees.

# THE ROAD BACK

By BRUCE H. YOUNG, M. D.

**For the disabled, return to work is retarded by physical and psychological roadblocks. Here's how Ontario's rehabilitation program is overcoming them**

**A** DEFINITION of rehabilitation is "the process of returning an injured workman to a normal and healthy position in his community."

To be successful, rehabilitation must be continuous—from the first-aid station to the return of the injured workman to gainful employment. In most injuries, the patient's own community is the place where this program should be carried out. Consequently we strive to use the community's medical resources to their maximum.

The answer to the problem is sought through the combined efforts of legislators, management, labor and medicine, with legislation interpreted by the Workmen's Compensation Board, consisting of three members. It is within this framework that we can accomplish some success in rehabilitation.

There is a point in the injury when more than the supervision of a doctor, physical therapist or any other single person is necessary. There is also a point in the process of the patient's recovery when the patient's belief in himself begins to wane. To deal with this set of circumstances the Ontario Workmen's Compensation Board provides a Hospital and Rehabilitation Centre.

At this Center are the various skills to accomplish our objective, and to superimpose leadership toward recovery for the man by a

team. The needs of any given individual vary. Consequently the services offered by the various representatives of this team will vary, depending upon the individual requirements. Thus, we provide a program that may be fitted adequately to an individual's needs.

We do no active surgical care. Ours is the care of the patient after the initial medical and surgical therapy. The members of our team are staff doctors, occupational therapists, physical therapists, remedial gymnasts, rehabilitation officers, psychologists, nurses, recreational officer, part-time teacher and an administrative staff to see that the overall unit functions smoothly and without delay. In addition, we have the maintenance staff, such as cleaners, kitchen and dietary personnel, making a total of 225.

## Feminine Influence

Only male patients are treated. Therefore, we choose a good percentage of female therapists, since it is my firm belief that we are all notoriously lazy and selfish, and have a natural instinct to exhibit our talents in front of the opposite sex.

In this way we have an atmosphere which is void of militant routine and one in which the necessary element of patient cooperation is stimulated. The young ladies on our staff are particularly skilled in the approach to our workmen, and in obtaining maximum performance under a given set of conditions.

The adage that "you can lead a horse to water, but you can't make him drink" applies in our work. It must be remembered that the

sum total of this program is the assessment of the individual from start to finish, and this assessment is only on the basis of what a man will do, not what he can do. In ascertaining the physical capacity of an individual, we must have his full cooperation. This can only be achieved by gaining his confidence.

At the outset we attempt to gain the patient's confidence by a thorough discussion of his problems with a staff doctor. This discussion is followed by a complete examination of the injured part. We must remember we are treating an individual, not merely an injured part.

Therefore, during this interview and examination we relate the man to his injury. Our patients frequently remark this is the first time they have had an opportunity to discuss their problems thoroughly with a doctor. This initial period also gives the doctor an opportunity to understand the patient's problem, and from this a program of active treatment, based on physical function, is assigned.

There is a saying at our Centre that if the man remains with us for four days he will remain willingly until his treatment is completed, because he observes the staff's personal interest as well as his own opportunities for improvement. He also talks with fellow patients and they impart to him knowledge that we try to assist him in getting better.

## Physical Therapy

Just as it is essential to have the patient's cooperation, it is equally important for the patient to see actual benefit from his treatment. Most patients feel the only form

Dr. BRUCE H. YOUNG is Superintendent, Hospital and Rehabilitation Centre, Malton, Ont. This article has been adapted from a paper presented at a joint luncheon of the Pulp and Paper and Wood Products Sections, 45th National Safety Congress, October 23, 1957.

of treatment which benefits them is physical therapy. This is the application of heat, massage, electrical therapy, or full-length water baths.

These methods are interpreted by the patient as being active and useful treatment. The various forms of therapy by easing discomfort, facilitate the next step of the rehabilitative treatment—functional treatment.

In this treatment various occupations offer the necessary use of muscle coordination to increase strength so the patient will gain confidence in his own ability and make progress. The use of these methods prepares the man for the work he has to do. I try to explain this to my staff by using the analogy of taking a quinine capsule. None of us would take a spoonful of quinine and drink it down with water, even though we knew the results would be beneficial, because of the extreme bitter taste of quinine.

### Recovering Skills

However, in a capsule it is easy to take and we obtain the same beneficial results. So, with the passive forms of treatment. These act as a capsule around the next step—obtaining proper muscle action individually and in a group manner, thereby increasing strength, as well as re-establishing patterns of movement. It is in this particular field that our Centre has made its unique contribution.

We use occupational therapy to develop and re-establish muscle patterns, adapting a craft or activity to a production function. In choosing an activity for the patient, we find if a patient chooses to make a product he or his wife or mother might be interested in, then we have the first evidence of good cooperation. We follow this, with direction by the occupational therapist, into that activity which will produce the most benefit for his injured part.

Activities of a lighter nature are arts and crafts. Of a moderate nature we use carpentry, handling projects made from wood, and in our heavy program we use gardening, or simulate or duplicate the man's activity. For example, if it were a hand case, we may

## ALL SHOOK UP

It's enough to get all shook up over to learn during the past year that:

Cigarettes are linked with cancer.

Tranquilizers and psychic energizers can be dangerous.

Nuclear fallout is hazardous.

Auto exhaust and industrial smoke are poisoning the entire population.

Coffee nerves and alcoholism are national afflictions.

Rock 'n Roll is demoralizing.

And, we still don't know where the yellow went.

But, the usual response is, "So what's new?"

They are selling more cigarettes, coffee, booze, tranquilizers, autos, and phonograph records than ever before. They are still exploding H bombs.

Maybe it's the mark of progress, or advanced civilization, that we can learn all these things and yet go out and buy bigger and better doses of same. Maybe we're merely swapping old bogey men for new models.

For example, food is now so plentiful we've swapped the hazard of famine for that of obesity.

We've swapped the hazards of ornery horses for those of ornery auto drivers.

Eye troubles due to candlelight are replaced by eye troubles due to TV light.

The quietness and simplicity of country life has switched to the psychoses and ulcers of city life. And so on.

No matter how shook up we get over new and more glamorous developments, the majority of us will still get liquidated by the same old horse-and-buggy problems. We'll trip over something, or fall off something, or run into something, or go around a curve too fast, or take a chance, or not follow instructions, or not heed a warning.

The simple everyday jazz will always be the most deadly. A thousand years from now we'll read of the joker who knocked himself off because he didn't know his rocket gun was loaded.

ROBERT D. GIDEL

want a fine movement such as a needle and thread activity.

However, we go over a list of projects with the patient to find out what he would like to make for himself, or others. His choice will be guided so that making the article will require proper functional use of his hand. It will have the interest necessary, because our patient is doing something he wishes to do, and he will also be exercising his hand properly, regaining its proper coordination with other parts of the body.

In this way we have rugged lumbermen, miners and construction workers accept light, unrelated activities with enthusiasm. Certainly, a few patients are not interested in this project, so we

must look further to find what will satisfy their desires and our requirements. It is necessary that the patient understand his activities.

I like to mention the case of John, hospitalized after an amputation of his right arm above the elbow. On his first day of hospitalization, he came to my office to say in a very belligerent manner, "I don't see any reason for staying here. That girl in green gave me, if you can imagine it, a ball to throw, and horseshoes to pitch with my left arm."

After discussing his problem for one hour, he was convinced that although we were going to fit him with a prosthesis that would help

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ORE comes to Interlake by way of the Great Lakes, is unloaded at this dock on the Calumet River.

## AWARD-WINNING TEAM

When union and management got together,  
down went Interlake Iron's accident rates

By WILLIAM R. VATH

**C**OOPERATION is the answer —complete agreement between our union and the management."

That's how Jess Ernst sums up the safety program that won a National Safety Award of Merit last October for both the Interlake Iron Corporation's Chicago Plant and Local No. 1657, United Steel Workers, AFL-CIO.

Jess is a machinist and president of the union at Interlake. He and his fellow union members are pretty proud of the 1,052,198 accident-free man-hours which brought them the award. It was the first time the Council had ever presented a duplicate plaque to a labor union when honoring a company for its safety achievements.

"There's nothing new about union-management cooperation here," says Jess. "We never have a disagreement on safety. This is the only company in the Calumet District where the union sits in with management on safety meetings."

Combined union-company safety committees are standard at all Interlake properties. The Calumet District is a vast area on Chicago's southeast side, crowded with steel mills and other heavy industries, some of which employ as many as 16,000.

Interlake's plant is small by comparison with some of its neighbors. On one side of Torrence Avenue are its offices and 100 coke ovens arranged in two batteries. Across the Calumet

River and a mile north are its two blast furnaces which turn out pig iron. Both operations employ a total of 750 men.

**Organization.** Safety Director Ralph Allen administers the accident prevention program, working in close cooperation with Abe Stromberg, Chicago plant personnel director, and L. F. Johnston, a 30-year veteran who directs safety activities for the corporation's six plants from the home office in Cleveland, Ohio.

Johnston gets weekly reports from each plant and forwards statistics and results of accident investigations to the safety man at each location. He visits each of them about every two months.

In Chicago, the union's safety committee is comprised of two



men from the coke plant and two from the furnace plant. These men, appointed by the union president for the duration of his two-year term, attend a joint safety meeting weekly with supervisors. Meetings last from 30 minutes to an hour and include a brief talk, a discussion of accidents and hazards, and a review of suggestions.

Safety Director Allen and Stromberg attend these meetings and call on two union safety committeemen to participate in all investigations of lost-time accidents.

Each department holds a safety meeting once a week. Supervisors often repeat the talks they heard at their meetings and make good use of the National Safety Council's "Five-Minute Safety Talks for Foremen." Home, vacation and traffic safety are covered along with plant safety.

**Maintaining Interest.** The company uses a variety of materials of its own as well as aids from the National Safety Council. Posters on the 18 boards are changed every three weeks. Outdoor signs, 8 x 10 ft., carry slogans and are illuminated at night (for the plant works three shifts). Cloth banners, 3½ x 10 ft., also flash messages on both shop and off-the-job safety to workers passing plant gates. Safety films are shown to all employees periodically.

*Interlake Magazine*, published monthly in Cleveland, always has at least one page of safety coverage prepared by Louis Johnston. In addition, Johnston edits the monthly *Interlake Safety News*, a one-page bulletin covering recent accidents in all company plants, and including brief articles on safety and housekeeping (sample: "Even scrap can look neat if it's piled carefully out of the way."), other safety subjects, NSC cartoons, etc. At present, this bulletin goes only to department heads and is posted near building entrances, but distribution to all employees is being considered.

A board at the gate house displays the number of days without a lost-time accident and the previous record. Two bulletin boards—one company and one union—often carry safety material. Right

now, the union's board proudly carries the Award of Merit plaque.

In the gate house Safety Director Allen displays items of protective equipment which have prevented injuries. He also uses insurance company posters and leaflets, as well as such NSC publications as *NATIONAL SAFETY NEWS* and *Industrial Supervisor*.

#### **Personal Protective Equipment.**

A wide variety of personal protective equipment is provided to cover the hazards involved in working around molten iron at 2,400 F. and coke at 1,800 F. Every employee receives a pair of goggles and a hard hat (bearing the slogan, "Work Safely"). Where needed, men wear asbestos coats, gloves, leggings, and respirators.

At his pre-employment interview, a new man meets Personnel Director Abe Stromberg, who also directed safety work at the Chicago plant until about a year ago. Safety is emphasized at this interview and the applicant is informed about the items of protective apparel which are provided. Safety shoes are not supplied or sold by the company, but workers are encouraged to wear them.

In his daily tours through the plant, Allen occasionally spots a man with his goggles on his forehead or in his pocket. He hands him a card with an eye safety message provided monthly by a goggle supplier. "This kind of re-

minder," says Ralph, "is not only effective—it also avoids any hard feelings, which might develop if a man were publicly reprimanded."

**Housekeeping.** The general appearance of the plant, even around the blast furnace, is very tidy. Aisles, though not marked, are clear of tools, materials and equipment. Iron and coke operations are about as clean and neat as they could possibly be at Interlake—although improvement is always stressed.

Washrooms are clean and bright—a couple of them are brand new. Locker rooms are neat and uncluttered and are sprayed weekly with insecticide. Walkways and most outside areas are clean and free from obstructions.

**Materials Handling.** A new conveyor, still under construction, will carry 1,600 tons of coke daily, eliminating the use of hopper cars and the hazards of cleaning them. Outdoor cranes handle pig iron with magnets. Everywhere possible, materials are handled mechanically. All moving equipment—switch engines, cranes, cars, etc.—are marked with high-visibility yellow and black diagonal stripes.

**Fire Protection.** A fire brigade is on duty on all three shifts. Twelve trained men are designated for the first shift and eight

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**SUPERVISORS** and labor representatives from the plant were proud of the safety record. Shown with the trophies are Clifford Parry, Supt. Furnace Plant; H. R. Nicklaus, Asst. General Supt.; and Jess Ernst, president of the union.

# Rx FOR SAFE

## Safety rules with a light touch aid operators in getting most out of fork lift trucks

**LOW-COST HANDLING** is safe handling. This fact is borne out time after time in job studies made in plants throughout industry. The effort, the equipment, and the alertness that it takes to move materials economically make the job a low-hazard one.

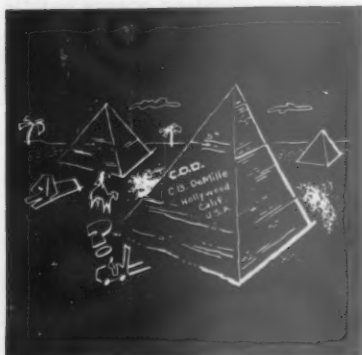
As handling costs drop, injury rates go down—in spite of the fact that materials move as much

as three times faster. Since materials handling safety and efficiency are so closely related, Towmotor Corporation, Cleveland, Ohio, manufacturers of fork lift trucks, emphasize safety in their new three-day training course.

The course is unique in its do-it-yourself form—it is so complete and simply outlined that any lift truck user can set up the entire program in his plant without the

help of expert instructors. The course also follows a do-it-yourself pattern for the operators, combining classroom instruction and study with actual truck operation to make the training stick.

It was impossible to separate safety from efficiency in the operation of lift trucks and other materials handling equipment, so the content of the course naturally includes safe handling practices. Plant layout, the design, maintenance, and performance of the equipment itself, the skill and personal characteristics of operators . . . all affect safety of handling as well as economy.



**STAY WITHIN RATED CAPACITY.** Your fork lift trucks handle plenty—why overload them?



**NEVER TRAVEL WITH LOAD HIGH.** Drive with forks a few inches from floor—lift load only when stacking it.



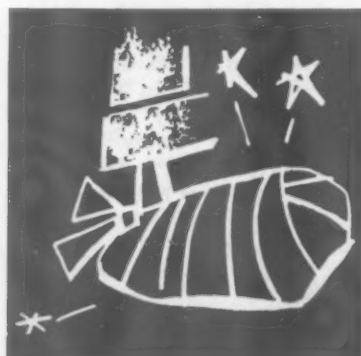
**TRAVEL SLOWLY AROUND CORNERS.** Watch "blind" corners—use the horn instead of the brake.



**WATCH REAR END SWING.** The truck's, we mean—save swinging for the dance floor!



**KEEP CLEAR OF EDGE OF LOADING DOCKS.** A couple of tons of materials and equipment make a nasty pile-up.



**ARMS AND LEGS CAN GET IN THE WAY.** Smart operators also shut off engine when leaving the truck.

# MATERIALS HANDLING

The authors of the course assume that materials handling supervisors have provided sound plant layouts. Taking good house-keeping for granted, the course merely touches the basic rules of proper physical arrangement.

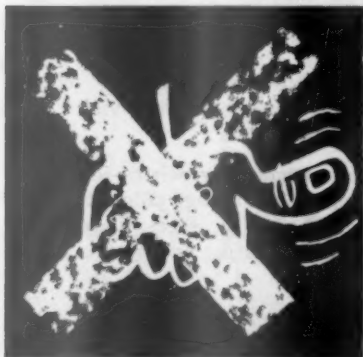
Some of the rules outlined in the course are:

**Maintain adequate aisles.** Stealing aisle space to add a few inches to production or storage areas costs far more than the value of the space gained. Too-narrow aisles obviously slow down fork lift travel, often present damage hazards to products, machinery

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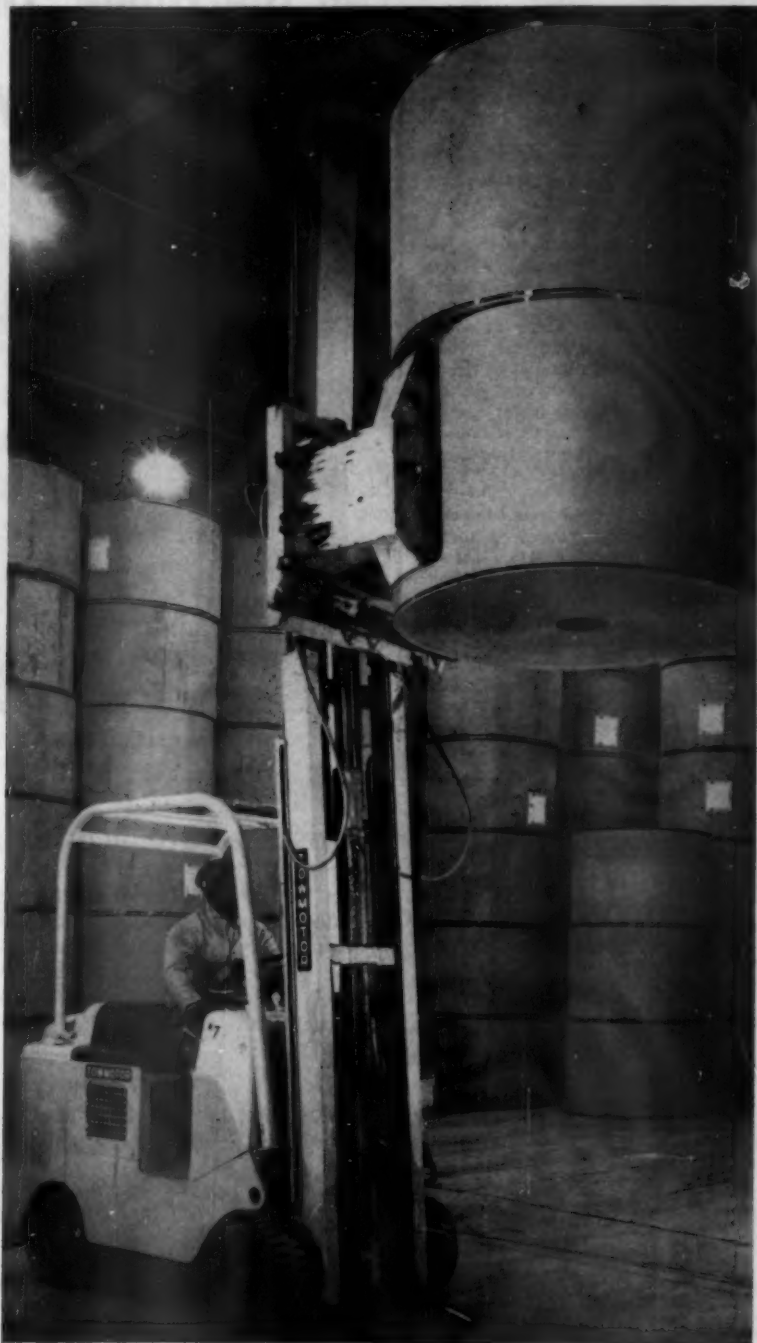


**AVOID SUDDEN STOPS.** Keeping good control of your truck prevents accidents and product damage.



**DON'T HAUL RIDERS.** It's called a lift truck because it lifts materials!

## NEEDED



**ACCESSORIES** to fit special shapes, a reasonable load, and a canopy guard for the driver's protection are essential for injury-free handling.

## MINUTE MEMO

—from the editor:

(Men and Steel)

**A**RE you a safe worker? You are! Good for you! Are you recognized as a safe workman by your supervisors and co-workers? You are! Excellent! Now, truthfully, are you a safe citizen? Do you do things the safe way off the job—at home, at play, on the highways? You pause. Hm!

You admit that you are a bit lax safety-wise off the job. Perhaps all you need is a review of good, common sense off-the-job safety practices? Well, sir, you can begin right now. Here's how!

You may learn there are some things unsafe around your home, about your manners at play, or with your style of driving. If you do, team up with your family and start eliminating those household hazards and correcting those unsafe acts!

Your family and your company need you—and you need them, too! When you practice safety on the job and then forget all about it off the job, you are only partly safe. Don't be partly safe with the safety of your loved ones, your friends, yourself! Begin today helping your family and friends to make the lives they save more than their own!



**SEAT BELTS** for the family car may prevent serious injuries in collision, or even a sudden stop.

## OFF THE JOB—Programs for plant and community

By Harry C. Johnson, NSC Staff Representative, OTJ Safety Committee

# In the Home, Out-of-Doors On the Highways



**DO IT YOURSELF** brings plant hazards to the home. Keeping the home workshop clean and tools in good condition is important.

**JONES & LAUGHLIN** Steel Corporation wants its employees to practice good off-the-job safety rules. The Corporation is continually reminding its personnel to do things the safe way in their homes, at play, and on the streets and highways by:

1. First-aid training.
2. Presentations of motion picture films.
3. The use of the employees' publication, *Men and Steel*, as a

medium for presenting information and illustrations.

4. Take-home racks containing safety literature.

5. Issuance of J&L auto bumper stickers "Safe Driving Saves Lives."

6. Providing speakers on the subject for church, civic, P.T.A. meetings, etc.

7. Displaying off-the-job safety posters at vantage points throughout the mills, offices, warehouses, and fabricating and mining operations.

Off-the-job accidents pose a real challenge to each and every one of us. We can appreciate their seriousness when we read of the ghastly toll exacted on the highway, at play, and in homes—es-

This article appeared originally in the September-October 1957 issue of *Men and Steel*, the company magazine of Jones & Laughlin Steel Corp., Pittsburgh, Pa. It was part of a 20-page feature section on Off-the-Job Safety by Frank W. Kelsey, safety coordinator for J & L.



pecially during week ends and the holiday seasons.

Industry, public authorities, associations, etc., can help to reduce the needless waste of human life and suffering caused by off-the-job accidents, but you, by following safe procedures, can do more than anyone else.

Some of the proper procedures and practices for off-the-job safety



**THE POWER MOWER** is a labor saver but it must be treated with respect. Rules for safe operation should be learned and followed.

are highlighted in photographs on the following page. Don't these photographs prove that it is just as easy to do the things you like to do, or have to do, the safe way? In fact, it is easier all the time to do things the safe way!

\*\*\*

I have often said that the most valuable asset of our Corporation is the men and women who do its work. If we are to conserve this asset, we must have an interest in the safety of our employees not only on the job but also off the job. The fact that a J & I employee suffers a serious accident off the job in no way lessens his family's distress, the pain of his injuries, the loss of wages, and the loss of his skills to the Corporation.

—BEN MOREELL,  
Admiral, USN (ret.), Chairman  
of the Board, J & I



**NO POISONS HERE.** They should be kept out of reach of youngsters—never stored with first aid supplies. Old bottles and medicines should be discarded.



**MOTHER** explains the danger of leaving toys on steps.

# IDEAS THAT WORKED

## Devices and Ideas to Help Your Safety Program

By Arthur S. Kelly, Industrial Department, NSC

### Don't Lose Your Tooth

The warning, "DON'T LOSE YOUR TOOTH," does not refer to real dentures, but to the Dennison Safety Wheel dreamed up at the Central Division of the Ohio Power Company, Dennison, Ohio. Each employee is assigned a tooth and his name is placed just below the tooth. Each month during the safety meeting the wheel is spun and the winner gets a small cash award—providing his assigned tooth has not been painted out.

A tooth is painted out for the balance of the year if the employee concerned suffers a disabling injury. This idea was conceived by Mr. H. D. Liggett, a senior foreman. The wheel is made of plywood and painted white. The teeth are painted red and are capped by metal strips to protect them during the spinning.

This idea helped the Central Division to work throughout 1957 without a single disabling injury in comparison to four disabling injuries during the previous year.

The horses? Well—they represent a slogan, "CONDUCT YOURSELF PROPERLY AT ALL TIMES—HORSEPLAY PROHIBITED." The Ohio Power Company in cooperation with the Ohio Industrial Commission features monthly slogans as a part of their all-out effort to eliminate accidents.

These ideas were submitted by Mr. Elden R. Hudson, manager of the Central Division of the Ohio Power Company.

### WINNER FOR DECEMBER

Winner for December was Fred Trobaugh, safety engineer, Keystone Steel and Wire Company, Peoria, Ill. Mr. Trobaugh submitted the idea of tying down the front end of trailers to a section of railroad with a clamp and short link of chain.

### Fire Watch

Here's an idea developed in the Boston Naval Shipyard that could be adopted in modified form in industry generally. In the shipyard during burning or welding operations, one man is designated as the "Fire Watch." He is provided with a fire extinguisher and stands by in case of fire. The "Fire Watch" often remains in the area where such work is being performed for a predetermined number of hours after the job is

finished to be certain that no delayed ignition occurs.

In the Navy, the work dress is similar for all sailors, and in a crowded compartment it was difficult to know who, if anyone, had been designated as "Fire Watch." Mr. Louis G. Randall, of the sheet metal shop at the Shipyard, suggested an arm band bearing the words, "FIRE WATCH," be given to the man assigned that duty. The idea was accepted for the entire Shipyard. Mr. Randall reports that it has worked out well.



## Interlocked Drill

Mr. William Francis Bachman, safety director for the Omaha Public Power District, is back with another idea that worked. Mr. Bachman's idea is an effective variation of the use of a chuck key to interlock the machine and the source of electric power, so the key cannot be left in the chuck and fly out when the power is turned on.

A limit switch de-energizes the drill press when the chuck key is removed. The key must be replaced before the drill can be started.

## Six Months Award Winner

In addition to the monthly award for the best idea submitted to "Ideas That Worked," we also give a cumulative award for the best idea of the six winning ideas during the six months period.

The winner for the last six months of 1957, July through December, was:

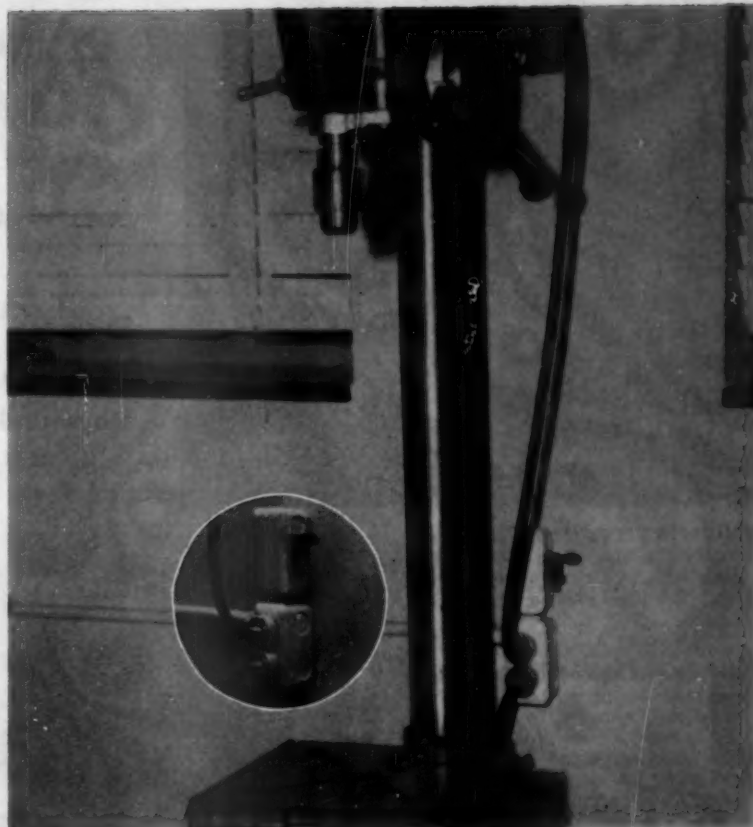
Robert C. Baker  
Safety Supervisor  
Croosa River Newsprint  
Company  
Croosa Pines, Alabama

Mr. Baker's idea was published in the August, 1957, issue of the NATIONAL SAFETY NEWS. The headline for the idea was "Shareholders in Safety." This is a safety contest in which all employees are issued a share of stock and the value of the stock fluctuates with the accidents the individual and the individual's department had.

### PRIZES FOR IDEAS

For the best idea printed each month, we will award \$15 worth of merchandise of the winner's choice from the NSC Incentive Catalog, or a personalized copy of the Accident Prevention Manual. Prizes totaling \$25 will go every six months to the best of the monthly winners.

Send a brief description with a photo or drawing to "Ideas That Worked," National Safety Council, 425 N. Michigan Ave., Chicago 11. Any idea, gadget, or home-grown invention that is preventing accidents in your plant is eligible.



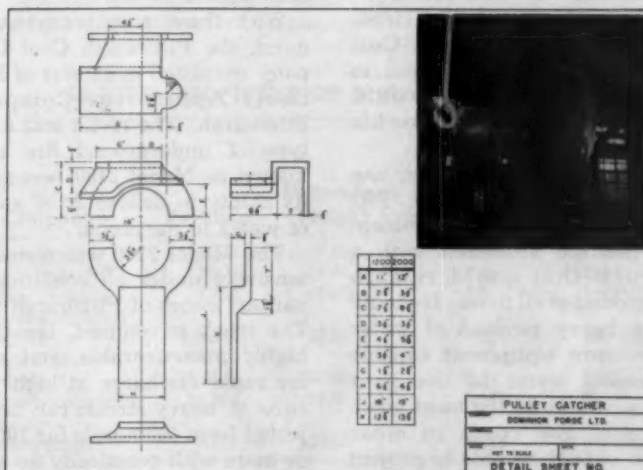
## Hold that Pulley Wheel

A number of methods have been devised for preventing a fly-wheel, pulley wheel or large gear from falling to the floor and injuring personnel and damaging equipment in the event of shaft breakage.

We like the idea shown above. It was submitted by A. J. Ziraldo, Dominion Forge, Ltd., Walkerville, Ontario, Canada.

Mr. Ziraldo reports four instances of shaft breakage in which the pulley-catcher kept the pulley from falling.

The three parts shown include the collared flange, which replaces the regular inner flange on the pulley, and the top and bottom pulley guards, which are attached to the machine—in this instance, a forging hammer.





**DEMONSTRATING** volume of fog produced with special nozzle. Same nozzle projects straight stream more than 100 ft. with almost no arc.



**MINERS** demonstrate fire-fighting techniques with fire truck built for Pittsburgh Coal Company by MSA. Designed to remain underground, truck is highly maneuverable and delivers 2100 gal. of water for rapid delivery at high pressure.

**FIGHTING FIRE** underground in a coal mine presents a variety of problems and hazards seldom found by fire fighters elsewhere.

Violent drafts of air whip up flames; heat, smoke, and gases repel the fire fighters, and it is difficult to bring equipment close to fire for effective use. And there is constant danger of explosions and roof falls.

Realizing these difficulties, Pittsburgh Consolidation Coal Company's operations set out to develop equipment that would provide greater protection for life and property underground.

Pittsburgh Coal Company, one of the operating divisions of "Pitt Consol," decided that the problem could best be answered with a fire truck that could remain underground at all times. It should carry a heavy payload of water and pressure equipment capable of directing water to the spot where it would do the most good. Because of low roofs in most mines it should be able to project



streams a considerable distance with almost no arc.

With these requirements in mind, the Pittsburgh Coal Company consulted engineers of Mine Safety Appliances Company, Pittsburgh. The result was a new type of underground fire truck known as Model 2100 because of its ability to deliver 2,100 gallons of water to the scene.

The Model 2100 was tested extensively under all conditions at various mines of Pittsburgh Coal. The truck is compact, low-slung, highly maneuverable, and ready for rapid discharge at high pressure. A heavy stream can be projected from the nozzle for 100 feet or more with practically no arc.

## COAL-MINE GUARDIAN

Designed specifically for mine protection, this fire truck stays underground, ready to pour a powerful stream on any blaze

The truck is of rugged construction and can remain underground close to points where it may be needed. The firehose, recently developed by MSA, is resistant to oil, acids, rot, vermin, and abrasion. It can be kept in the mine indefinitely. After use it can be replaced on the truck without drying or other attention.

The fire truck is 18 ft. long, 7 ft. wide, and 50 in. high. Units of lesser height are available where clearance is limited. The unit carries 200 ft. of single-conductor cable on a reel at the rear of the tank. Pump motor assembly, including controls and valves, is recessed in the side of the tank for ease of hook-up and maintenance.



# METAL HYDRIDES

Published by National Safety Council,  
425 North Michigan Avenue, Chicago 11

## General

1. Hydrides are defined simply as compounds of metals and hydrogen. Safety in handling them in the laboratory or plant can be a serious problem unless their properties are understood and certain basic precautions are accepted and followed.

2. Of the large number of simple and complex hydrides known, only a few are of commercial importance. These are the *binary saline hydrides*: lithium hydride ( $\text{LiH}$ ), sodium hydride ( $\text{NaH}$ ), and calcium hydride ( $\text{CaH}_2$ ); the *complex saline hydrides*: lithium aluminum hydride ( $\text{LiAlH}_4$ ), sodium borohydride ( $\text{NaBH}_4$ ) and potassium borohydride ( $\text{KBH}_4$ ); and the *alloy hydrides*: titanium hydride ( $\text{TiH}_2$ ) and zirconium hydride ( $\text{ZrH}_2$ ).

3. This data sheet will cover only the binary saline hydrides and the complex saline hydrides.

## Properties

4. Some of the physical properties of the metal hydrides discussed in this data sheet are found in the accompanying table.

5. Sodium hydride and calcium hydride are prepared by heating the parent metal in a hydrogen atmosphere at 200 to 300 C.

This Data Sheet is one of a series published by the National Safety Council, reflecting experience from many sources. Not every acceptable procedure is necessarily included. Data Sheets should not be confused with American Standard Safety Codes, federal laws, insurance requirements, state laws, rules and regulations, or municipal ordinances.

6. Lithium hydride is prepared by the action of hydrogen on molten lithium at 700 C.

7. Lithium aluminum hydride and sodium aluminum hydride are prepared by the interaction of an ether solution of aluminum chloride with a slurry of the alkali metal hydride.

8. Sodium borohydride is prepared by adding trimethyl borate

to sodium hydride with heat and agitation. Potassium borohydride is prepared by adding potassium hydroxide to an aqueous sodium borohydride solution at room temperature.

## Uses

9. Lithium hydride is used in the preparation of many simple and complex hydrides such as lithium aluminum hydride, lithium borohydride, and diborane. It is used as a catalyst in the preparation of synthetic polymers, and as a source of hydrogen in military applications. The chemical properties of lithium hydride are in general similar to those of the other alkali metal hydrides and the alkaline earth hydrides.

SELECTED PROPERTIES OF SEVEN METAL HYDRIDES

Compound	Formula	Molecular Weight	Specific Gravity (grams per cu. centimeter)	Decomposition Temperature
Lithium hydride	$\text{LiH}$	7.95	0.780	850 C
Sodium hydride	$\text{NaH}$	24.01	1.41	420 C ( $\text{H}_2$ Atm)
Calcium hydride	$\text{CaH}_2$	42.10	1.8	1,000 C
Lithium aluminum hydride	$\text{LiAlH}_4$	37.94	0.914	100-130 C
Sodium aluminum hydride	$\text{NaAlH}_4$	54.00	1.23	230 C
Sodium borohydride	$\text{NaBH}_4$	37.85	1.074	300 C
Potassium borohydride	$\text{KBH}_4$	53.95	1.178	500 C (vacuum)

10. Sodium hydride is used chiefly as a drying and purifying agent for inert liquid gases, and as a condensation and alkylation agent in organic reactions, such as the Claisen and Stobbe reactions. Sodium hydride is more suitable for these condensations than is the parent metal because it has far less reducing action and side reactions are therefore inhibited. It reduces many inorganic metal oxides and halides at elevated temperatures, but has no effect on organic halides at room temperature.

11. Sodium hydride is also used as 25 per cent and 50 per cent (by weight) semi-dispersions in a mineral oil.

12. The 25 per cent dispersion has the consistency of paint. The particles of sodium hydride settle slowly on standing but may be readily dispersed again by action of a paint shaker for small samples or of a drum tumbler for commercial quantities. This dispersion can be pumped and metered.

13. The 50 per cent dispersion is a granular meal of hydride particles coated with oil. No settling occurs on standing or shipping, and this dispersion can be transferred on a screw conveyor.

14. Among the chief uses of calcium hydride are the following:

- a. As a source of pure hydrogen;
- b. As an agent, at high temperatures, for reducing refractory oxides, such as titanium dioxide;
- c. As a purifying and drying agent for solvents and certain gases;
- d. As a reagent, when heated, for quantitative reaction with oxygen, nitrogen, acetylene, sulfur dioxide, carbon dioxide, and hydrogen sulfide.

15. Lithium aluminum hydride and sodium aluminum hydride are used primarily for the reduction of carbonyl and carboxyl groups to hydroxyl groups and

for the reduction of amides to amines. These hydrides also reduce organic halides to hydrocarbons. Generally, these hydrides are used in the pharmaceutical, fine organic chemical, and perfume industries, where freedom from side reactions and high yields are of prime importance.

16. Sodium borohydride and potassium borohydride are used principally as selective reducing agents for organic compounds. They also may be used as generators of pure hydrogen. Both these hydrides reduce the carbonyl group of aldehydes and ketones in water, alcohols, or amines, and reduce acid chlorides in tetrahydrofuran or dioxane to alcohols.

### Shipping and Storage

17. Lithium hydride is stable in dry air at normal temperatures and can be safely stored for extended periods in sealed containers. It is extremely vulnerable to attack by water vapor with resulting rapid deterioration; this is particularly true of the finely ground material. Suspensions of lithium hydride dust in dry or wet air form explosive mixtures which are readily ignited by sparks caused by static electricity or other means. Lithium hydride is combustible and burns slowly with intense heat.

18. In small quantities, the metal hydrides are shipped in hermetically sealed, friction-top cans or screw-top bottles which have been baked dry. Larger amounts are shipped in containers which have been flushed with an inert gas before being sealed.

19. Lithium hydride must be packed in 17C, 17H, or 37D steel drums, as specified in *Agent H. A. Campbell's Tariff No. 9, Sec. 73-206*, if Interstate Commerce Commission regulations are to be complied with.

20. Metal hydride containers should be stored in dry, cool areas with adequate ventilation.

21. With the exception of sodium and potassium borohydrides, no moisture in any form should be allowed to come in contact with the hydrides. Moisture-reactive hydrides should not be processed, used, or stored in buildings equipped with sprinkler systems, in areas of high humidity, in locations having uninsulated cold water pipes, in flammable solvent storage areas, or in acid storage areas.

22. In storage rooms and production areas, all lights, switches, motors, and electrical outlets should be explosion-proof, and there must be adequate forced ventilation. Smoking and use of matches should be prohibited in such areas to prevent ignition of hydrogen which may be evolved.

23. When an employee opens a container of a metal hydride, except sodium or potassium borohydride, it is advisable for him to wear goggles, a face shield, and gloves.

24. If no distortion of the can is noted, the lid should be pried up slowly. A hissing noise denotes escaping hydrogen. If the can is noticeably bulged, more care should be exercised, because the cover, once pried loose, may be blown off. If the container is opened repeatedly to remove small amounts of the hydride from time to time, it should be opened in an inert atmosphere ("dry box") each time.

25. Before a container of a metal hydride, except sodium or potassium borohydride, is resealed, it should be purged with a dry inert gas to displace any moisture. Moisture in the container would react with the hydride to release hydrogen, and enough hydrogen might be evolved to cause excessive pressure inside the container, with resultant misshaping or bursting of it. Lids of containers should never be left off for long periods of time.

## Hazards

26. The degree of hazard in the storage and handling of metal hydrides increases as the size of particles decreases. All of the saline hydrides, both binary and complex, react alkaline on contact with water, and should not be allowed to touch the skin or be inhaled into the respiratory tract. In summary form, the accident, health, and fire hazards associated with the use and storage of metal hydrides are:

- a. Fire and possible explosion if water, either as a liquid or vapor, comes in contact with sodium hydride, lithium aluminum hydride, or sodium aluminum hydride. Calcium hydride and lithium hydride are less likely to ignite spontaneously under such a condition. Large lumps of lithium hydride on reaction with water do not ignite, but finely ground lithium hydride will often do so.
- b. Dust explosions of lithium hydride, sodium hydride, calcium hydride, lithium aluminum hydride, or sodium aluminum hydride if finely dispersed in air.
- c. Direct ignition of the hydride powder by flame or spark.
- d. Build-up of hydrogen gas in a poorly ventilated location when a hydride reacts with water.
- e. Explosions when certain solvents are being distilled to dryness in the presence of aluminum hydrides or halides.
- f. Formation of toxic and explosive borohydrides or diborane when aluminum, boron, or beryllium halides or other acid halides come in contact with sodium or potassium borohydride.
- g. Caustic skin burns from contact of hydrides with the moisture on the skin.
- h. Eye, nose, and throat injuries from contact with solutions of hydrides or from inhalation of hydride dust.
- i. Irritation of the eyes and mucous membranes of the nose and throat due to breathing fumes from hydride fires.

## Handling

27. Equipment used for processes involving the metal hydrides should be located in an explosion-proof area to prevent spark ignition of hydrogen-oxygen mixtures. Smoking or the carrying of matches by personnel in the area must not be allowed. Electrical equipment should be explosion-proof, and adequate ventilation must be installed to remove hydrogen.

28. All reactors, solution receivers, and other processing equipment, whether in the laboratory or in the plant, should be baked until thoroughly dry and purged with a dry inert gas before the hydrides are introduced.

29. After the process equipment has been purged several times with a dry inert gas, an oxygen determination should be made of the equipment's contents (except for equipment that is to be used with sodium or potassium borohydride). It is recommended that the oxygen volume be less than 1 per cent before a hydride is introduced into the receiver.

30. Processing equipment made of mild steel is adequate except where aqueous mineral acids are used to break lithium aluminum alcoholate complexes resulting from the reduction. In such cases, suitable corrosion-resistant stainless steel must be used.

31. Exhaust lines should be of large diameter and should lead to a safe area away from personnel, equipment, and moisture.

32. Each reactor and storage tank should be equipped with both safety relief valves and rupture disks, to warn of unexpected build-up of hydrogen pressure. The disks should be set at 10 psi gauge above the valves. Both valves and disks should be checked periodically.

33. Since sparks can ignite the hydride fines and the evolved hydrogen, tools, weighing pans, funnels, and other equipment

should be made of a spark-resistant metal, such as beryllium-copper alloy. Equipment should be grounded, and only clothing made of nonstatic-forming material, such as cotton, should be worn by employees.

34. Jackets of reaction vessels for the sodium hydrides should be heated and cooled by heat-transfer oil rather than by water. Oil-cooling is also preferred for condensers attached to these reaction vessels.

35. Sodium hydride and lithium aluminum hydride are generally reacted in the presence of flammable organic solvents. These solvents must be proved to be moisture-free before they are used. The hydride should be placed in the reactor under an inert dry atmosphere first. Then the dry solvent should be added.

36. As an alternative, the solvent can be placed in the reactor first and the hydride added in a sealed polyethylene bag. When the reactor is closed, the bag is broken and the granular hydride is liberated under the surface of the solvent.

37. A flammable solvent and granular sodium hydride, lithium aluminum hydride, or sodium aluminum hydride should never be exposed simultaneously to the atmosphere.

## Waste Disposal

38. Excess sodium hydride remaining after a reaction can be decomposed by the addition of alcohols. The higher alcohols give slower and milder reactions. The evolved hydrogen must be vented to a place free from sources of ignition, or must be collected and burned.

39. Large-scale residues of sodium hydride in reaction products may be flushed from the reactor by first agitating with a chemically inert solvent, such as



kerosene, and then clearing with a methanol wash to remove all or most of the lingering traces. Upon completion of this wash, water may be added *cautiously* to hydrolyze any remaining material.

40. If water is used, the reactor and its valves, gauges, and other parts must be dried carefully and inspected for traces of moisture before it is again used for sodium hydride.

41. When reacting lithium aluminum hydride or sodium aluminum hydride, the excess hydrides may be destroyed in the reaction vessel by addition of acetone or ethyl acetate with vigorous stirring to break up any lumps. The alkali aluminosilicates are then destroyed in a separate vessel by use of aqueous acids.

42. Storage containers for lithium aluminum hydride or sodium aluminum hydride should be weathered outside for 24-hour periods to assure complete reaction before they are sent to a dump. Small portable reactors, filters, and similar equipment should also be weathered outdoors for at least one day. Then they should be flushed with dry dioxane and kerosene, then with wet dioxane or a methanol dioxane mixture. Water may be used as a last resort, but must be added cautiously. The equipment must be carefully dried and inspected before it is returned to service.

43. Residues from borohydride reductions can be washed out with water or steam with no hazard involved. Unreacted borohydride is easily destroyed by mineral acid if adequate ventilation is provided for evolved hydrogen. Solutions containing unreacted borohydride should not be run into drains. If the drains should contain dilute acids, there would be a vigorous evolution of hydrogen with a consequent hazard. Lithium borohydride would react like lithium aluminum hydride, yielding much hydrogen with pure water.

44. Weathering of equipment used for borohydride reactions is unnecessary, in contrast to the weathering requirement for equipment in which lithium aluminum hydride, sodium aluminum hydride, or sodium hydride is used.

### Personal Protection

45. Protective equipment and clothing should include dust-tight or splash-proof goggles, face shields, gloves, flameproof coveralls treated with an antistatic solution, and high boots or shoes. In some cases, respirators may be required.

46. Operators handling quantities of lithium hydride should wear goggles, face shields, or both, rubberized gloves, flameproof outer clothing, and a respirator.

47. Face shields and goggles are recommended for employees who handle dry, granular sodium hydride.

48. For handling sodium hydride, moleskin gloves are considered adequate. Asbestos gloves should not be used since burning sodium will react with the asbestos. Rubber gloves should be used for the handling of aluminosilicates.

49. Personnel should not let their clothes become contaminated with hydride powders. Moisture in wash-up and locker rooms will react with hydride powders, causing ignition of clothing and body burns. Clothing which has become contaminated should be brushed clean or discarded.

### Hydride Fires

50. Water, carbon dioxide, carbon tetrachloride, chlorinated hydrocarbons, or soda ash must never be used as an extinguishing agent for hydride fires. Furthermore, such extinguishing agents should not be used in buildings where hydrides are stored. Dry powdered dolomite or dry graphite powder, to smother the fire, is recommended.

51. Fumes of burning hydrides are no more toxic than the parent alkali metal, but breathing them may cause respiratory irritation. Respirators should always be used by employees when they are combating hydride fires and removing burned waste. Such waste should be treated as a hydride since some reactive hydride may remain.

### First Aid

52. The immediate first-aid procedure recommended for skin contact with metal hydrides is to brush the material from the skin and flood the exposed area with large volumes of water for 10 to 15 minutes to remove adhering hydride particles. Slurries or solutions should be covered immediately with powdered limestone and then brushed off.

53. After the exposed skin has been thoroughly flushed with water, the burned person should always report to or be taken to the medical or first-aid department immediately.

54. A doctor's attention should be obtained at once because if decomposition products have lodged in the skin, they will continue to burn inward. The physician can take measures to control the dermatitis that usually develops from particles that have not been completely washed away during the first-aid treatment.

55. If metal hydrides come in contact with the eyes, immediate flushing with copious quantities of running water for at least 15 minutes is imperative.

### ACKNOWLEDGMENT

This data sheet was prepared by the Executive Committee of the Chemical Section, National Safety Council. It has been extensively reviewed by members of the National Safety Council and representatives of chapters of the American Society of Safety Engineers. The data sheet has been approved for publication by the Publications Committee of the Industrial Conference of the National Safety Council.





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# President's Conference Plans Forward-Looking Program

**S**AFETY conserves manpower . . . manpower builds the future. These express the forward-looking theme of the 1958 President's Conference on Occupational Safety to be held in Washington, D. C., March 25-27. Chairman of the Conference will be Secretary of Labor James P. Mitchell.

Questions to be examined during the three-day conference include: What economic changes can we expect in the next decade? How much do we know about the changing characteristics of our labor force? If we can foresee these changes, how will they affect our safety thinking in the critical years ahead? Where will we need to change our programs—and how soon?

Ten years ago the first President's Conference reported extensively on the safety requirements of the nation. Later conferences recommended new areas of attention and reviewed some of the stubborn older problems.

The history of the conference has been marked in two ways: (1) A critical review of all problems in job safety and means of applying recommended techniques; (2) A focusing of attention on rapidly changing techniques relating to automation, electronics, and the use of atomic energy.

Against this backdrop, the 1958 Conference will examine a wide variety of safety problems, including vital and relatively less understood areas of human motivation, radiation, and the relationship between medicine and safety.

Following opening remarks by the President and Secretary of Labor Mitchell, Ralph Cordiner, president of General Electric Company, will address delegates on "Tomorrow's Challenge for Safety" on the afternoon of the first day of the Conference. At the closing session, delegates will hear addresses by prominent la-

bor and management spokesmen. Benjamin Fairless, president of the American Iron and Steel Institute, has accepted an invitation to speak on "Safety As an Operating Responsibility." A spokesman for the trade union movement will be announced shortly.

## Workshops

Workshops have been scheduled for the morning and afternoon of March 26. Actual programs are not yet completed but the subjects, moderators, and consultants are as follows:

### *What Makes Us Work Safely?*

Dr. Harry Levinson, Menninger Foundation, moderator; Dr. Leon Brody, New York University; Clinton Fair, AFL-CIO.

*Figures at Work:* Ewan Clague, U. S. Bureau of Labor Statistics, moderator; Gene Miller, National Safety Council; Frank McElroy, U. S. Bureau of Labor Statistics.

*Off-the-Job Safety—An Integral Part of Your Safety Program:* J. Sharp Queener, E. I. du Pont de Nemours & Co., moderator; Roy P. Hamilton, St. Louis-San Francisco Railroad; Robert Hagopian, Association of Casualty and Surety Companies; Lloyd Utter, U.A.W.

*The Schools' Contribution to Occupational Safety:* Dr. Lowell B. Fisher, University of Illinois, moderator; Dr. Wayne P. Hughes, National Safety Council; Francis W. Flynn, Chicago Vocational High School; Dr. Herbert J. Stack, New York University.

*Expanding Safety Activities Through Organizations:* H. F. Reinhard, Union Carbide Corp., moderator; Joseph C. Stennett, National Association of Mutual Casualty Companies; A. M. Baltzer, National Safety Council.

*Radiation—A Controllable Hazard:* W. A. Kitts, III, vice-admiral, USN (ret.), General Electric Company, moderator; D. F. Hayes, U. S. Atomic Energy Commission; Henry Lamb, American Standards Association; Elwood D. Swisher, Oil, Chemical, and Atomic Workers.

*How Can the States Promote Safety?* Ernest B. Webb, California Department of Industrial Relations, moderator; James G. Sweeney, New York Department of Labor; Harry Boyer, Pennsylvania Industrial Union Council.

*Doctor and Nurse Contribute to Safety and Health:* Dr. Leo Wade, Esso Standard Oil Company, moderator; Miss Charlotte R. Burmeister, American Association of Industrial Nurses; Clark D. Bridges, Industrial Medical Association.

Through the President's Conferences on Occupational Safety in previous years, various groups and interests have agreed upon action programs which provide the basis for substantial progress in occupational safety. To aid in the President's Conference, both directly through the program and through its own efforts toward the same objectives, the National Safety Council during the past year appointed a Special Committee on Assistance and Participation in the President's Committee on Occupational Safety. This committee, under the chairmanship of Dr. William P. Yant of Mine Safety Appliances Company, consists of three representatives each from the Industrial, Farm, and Labor Conferences of the National Safety Council and the American Society of Safety Engineers.

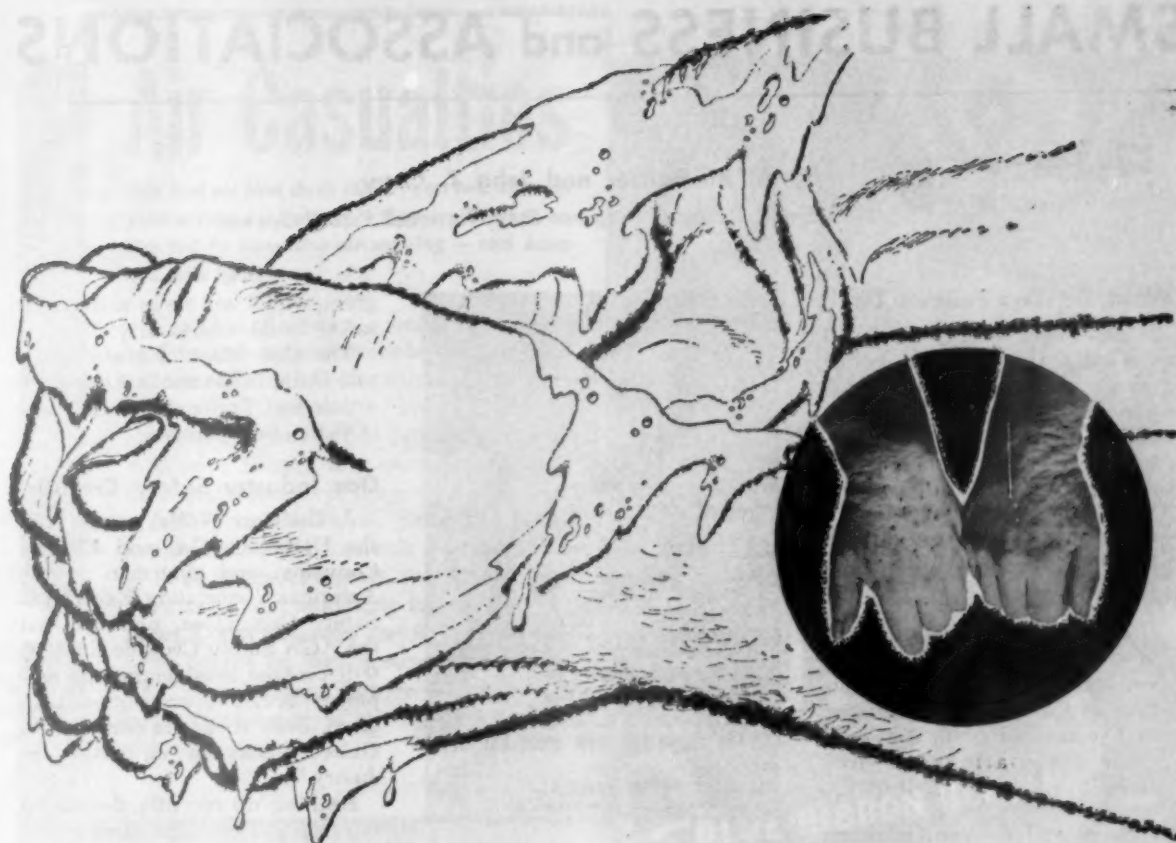
## IMPORTANT DATES

The President's Occupational Safety Conference,

Washington, D. C.,  
March 25-27

Second World Congress on the Prevention of Occupational Accidents,  
Brussels, Belgium,  
May 19-24

46th National Safety Congress,  
Chicago,  
October 20-24



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National Safety News, February, 1958

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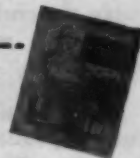
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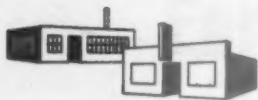
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# SMALL BUSINESS and ASSOCIATIONS



By A. M. Baltzer and John T. Curry

Small Business Program Staff, National Safety Council

## "What Do You Fellows Do?"

Some folks come right out and ask what we do between coffee breaks, others may just wonder—and others may not care. To help enlighten those who are interested, here is a brief report of some of our recent activities.

- Talked to two groups of personnel managers from small plants.

- Manned a safety exhibit at the Washington, D. C. convention of the American Bottlers of Carbonated Beverages, and consulted with several other associations in "free time."

- Attended several planning committee meetings for the President's Conference Workshop dealing with associations.

- Met with staff executive and three safety committee members of the National Pest Control Association to discuss a survey of programs to control work injuries, fleet accidents and public claims.

Similar information was also given in an exchange of correspondence with two statewide trade associations representing concrete block plants and auto repair shops... an encouraging interest in traffic and community safety in addition to the usual interest in workmen's compensation.

- Participated in a round table on workmen's compensation with several association executives.

So it goes—talks, consultations, program planning, and correspondence with members of our Small Business and Associations Committee.



POSTERS such as this "doll up" the 33rd Annual Statewide Accident Prevention Campaign January 5 to March 29, of Associated Industries of New York State, Inc. As in previous years, the campaign is expected to result in a further cut in injuries. Last year a total of almost 1,700 companies reported a low frequency rate of 7.66.

## Associations Plug Public Safety

It is encouraging to note recent samples of association literature which are promoting public safety activities beyond the scope of membership services. This trend refutes the charge that associations are self-seeking and serve only "special interests."

The National Association of Refrigerated Warehouses, in two recent bulletins, featured articles on "Safety in the Home" and "Back the Attack on Traffic Accidents."

The Gypsum Association's December 1957 Safety Bulletin, featured a half-page article on "Home, Safe Home."

The South Florida Concrete and Products Association is embarking on a commercial vehicle pro-

gram, which will tie in with traffic safety in the community.

The Can Manufacturers' Institute Bulletin has another one-page article on "Traffic Accidents" and "Off-the-Job" safety.

## Gas Industry Safety Crusade

J. Theodore Wolfe, president of the Baltimore Gas and Electric Company, and chairman of the American Association Executives Safety Committee, predicts that the AGA Safety Crusade for 1958 will be "the most ambitious employee accident prevention program ever undertaken in the United States by an entire industry."

Backing up recently developed flip charts, films, and other effective safety material, will be a series of regional safety training courses for supervisors.

We predict that Mr. Wolfe's prediction will prove correct.

## President's Conference and Association Safety

The March 25-27 President's Conference on Occupational Safety again recognizes the influence of associations, chambers of commerce, and other groups in the promotional campaign to reach and help "the un-reached." Prominent association executives have assisted in planning the program, and will participate in it.

Of special note is the workshop on "Expanding Safety Activity Through Associations and Other Business Groups." Well-known association executives, insurance engineers, labor and local safety council officials, will discuss several important aspects of association work. Past successes will be summarized so that future programs can be patterned after them. Specific "how-to-do-its" will be suggested for multiplying these successes.



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(Fiction)

## THE DIARY OF A SAFETY ENGINEER

The meeting was a flop. The old familiar approaches fell flat. What was wrong? After watching his assistant conduct a meeting our Safety Engineer decided there must be something to the new techniques

# Meetings – Bad and Good

By BILL ANDREWS

February 3, 1957

Nobody was asleep when I finished my talk on plant housekeeping this morning. But as I brushed the chalk dust from my hands, picked up my notes, and put my charts into my briefcase, I could feel the apathy in the group of foremen shuffling out of the conference room. The murmur of talk was dull in tone. Nobody came up to ask any questions. And Lee Arthur, my assistant, remained seated at the back of the room, his face a blank, opinionless mask.

How many times have I been through this business of confronting a group, haranguing them on some fairly important issue, pounding suggestions at them, then walking out with charts in a briefcase, leaving an empty room with full ashtrays and a smeared blackboard?

I suppose I've done that 500—no, a thousand—times in 23 years of safety work. And what does all that talking on my part and all that listening on my audiences' add up to in terms of life and health?

How often have I asked myself, "What am I trying to do, and how can I do it better?" Not often enough, maybe.

This morning, though, I did ask myself those questions. And I knew I didn't really have the answers. Lee still sat in his chair,

waiting, I think, to let me go ahead of him so that he wouldn't be faced with an embarrassing question. So, on a hunch, I decided to put that question, whatever it cost both him and me in embarrassment.

I laid down my briefcase and went to the back of the room, and sat in the next chair to Lee. "It was a bad job, wasn't it?" I asked.

Lee nodded, "Pretty bad. I've been trying to figure it out. We drag a bunch of these men into a room, make them listen to something they think they know all about. Since the problems are pretty much the same as they were last time we had a meeting on the subject, what we tell them is just about the same as we told them before. So they just sit and suffer. They don't see anything in it for themselves."

\* \* \*

I didn't answer right away. I was trying to review my own thinking on the problem, trying to defend myself from myself. After all (I could say) bad housekeeping is a problem that exists and that is always likely to produce accidents. I know from experience that a meeting like this will help a little, for a while, in lifting the housekeeping level. I tried to liven the talk up by using some pretty interesting charts, using the blackboard, giving some lively

anecdotes to illustrate points. Oh, yes, I gave it the good old college try.

*And that try wasn't half good enough.*

Finally Lee opened up on me with material garnered, I suspect, from a couple of college courses in psychology, with a little material added which was probably lifted from one of the current books on motivation research. A lot of what he said was obvious. A lot more of what he said was half-baked and sophomoric. But there was still a core of truth in what he said.

A phrase he kept throwing out was "group dynamics," which apparently is a sort of pseudo-science in the field of making meetings work. Two things he said impressed me. They were:

"We've got to learn to give the person in the group a feeling that what is going on is something they can give to as well as something jammed down their throats."

And, "Everybody is hungry to be recognized. We have to give them that recognition if we expect them to accept us."

Thinking about those, I tried to see into the mind of a foreman at the meeting, sitting like a nobody in the back of the room, offered no chance to participate unless he wanted to ask a question that would show his ignorance.

—To page 137

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# SCRATCHED LENSES CAN CAUSE ACCIDENTS

## *Testing Laboratory*

**OBJECT:** Wipe plastic safety shield lenses with silicone impregnated lens tissue and with Lensclean rayon lens tissue to determine if either or both tissues scratched the plastic surface.

**RESULT:** After both tissues had been used to wipe the plastic lenses the lenses were examined microscopically. Lens wiped with silicone tissue had by far more scratches.

**CONCLUSION:** The use of Lensclean rayon tissue reduces by a great extent the amount of marking or scratching of a plastic lens surface.

\*Extract of a report from A Leading Independent Eastern Testing Laboratory

## NEW

## RAYON "LENSCLEAN" TISSUE Economically Reduces this Safety Hazard

**A specific Lenscleaning Tissue for a specific job.**

### SILICONE

Low in cost, these uniformly impregnated silicone tissues are made with 100% flax (Linen) base paper.

Expressly designed for use on either eyeglasses or any finely ground optical surface, no other tissue is superior in quality or more economically priced.

Simply dispensed from a metal dispenser which can be quickly installed any place throughout your plant.

### RAYON

Barely visible scratches on plastic lenses of Safety Goggles impair vision, cause continual eye strain and body fatigue . . . increasing the possibility of accidents.

Lensclean R-24 Rayon tissues were developed to meet U.S. Government Specifications for a wiping tissue that is virtually non-scratching. Each long-fibre (1/4" or more) tissue has high wet strength to prevent shredding or tearing when used.

Economically priced each tissue is easily dispensed from an attractive dispenser.

*Both Rayon R-24 and Silicone S-3C Lensclean tissues will fit any standard size 3 x 7" dispenser. Information and samples on request.*



  
lensclean inc.

*Lens tissues since 1922*

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# AROUND THE COMPASS



ACTIVITIES • PROGRAMS • EVENTS

By Nils Lofgren

Field Service Department, NSC

## Wisconsin Council Makes Appointments

Announcement is made by Clyde Schlueter, Wausau, vice-president for traffic safety, Wisconsin Council of Safety, of the following appointments of committee chairmen of the WCS Traffic Division:

Education—Mrs. John Krueger, of Loewi & Company, Milwaukee.

Enforcement—E. Clark Woodward, of A. O. Smith Corp., Milwaukee.

Engineering—M. C. Olsen, of Hardware Mutuals, Stevens Point.

Laws and Ordinances—William E. Fanning, of Allstate Insurance Company, Milwaukee.

## Roanoke Valley Holds Traffic Conference

The first annual Roanoke Valley Citizens Traffic Safety Conference was held December 7 in Roanoke, Va.

Invitations to the Conference declared:

"This conference is critically important to the future of the Valley for the one reason that caused your Roanoke Valley Citizens Traffic Safety Council to call it. This traffic problem has grown through the years to a point that prohibits here-and-there improvement applications. The attack must be a studied, planned, unified, and co-ordinated one, in order to be effective."

Between two general sessions, meetings were held on each of these subjects: Laws and Ordinances, Accident Records, Engineering, Enforcement, Traffic Courts, School Traffic, and Public Education.

Speakers at the two general sessions were George C. Stewart, executive vice-president, National Safety Council, and M. R. Dar-

lington, Jr., managing director, Inter-Industry Highway Safety Committee.

George E. Grotz, district director for NSC, presented a summary statement on the Conference.

## Rehabilitation Program Set For Michigan

In a pioneering traffic safety step, rehabilitation schools for drivers with bad records are being set up in about 20 Michigan counties under terms of a permissive law enacted by the 1957 Legislature.

Malcolm D. Whale, an official of the State Department of Public Instruction, said he thought the movement would spread until it touched most of the state's 63 counties.

Rules governing the new driver safety schools were given a public hearing and will go into effect after review by the state attorney general and signing by Governor Williams.

## Cheyenne Makes Use of Poster Boards

The safety business, like many others, often demands ingenuity.

Charles E. Sands, president of the Citizens Safety Council of Cheyenne, Wyo., found this out when he was given the use for four months of 17 poster boards of a size for which there were no safety posters available.

The boards are known as three-sheets and provide for a poster area 42 x 84 inches. By using two of the NSC "C" size posters, the problem was solved. "Back the Attack" posters and posters on current themes will be used together on these boards for the four-month period.

## Seattle Builds Safest Crosswalk

To overcome the sense of false security that many pedestrians display while in crosswalks, the Seattle-King County Safety Council and the Seattle Police Department installed two walls of concrete blocks at a local intersection as part of their December educational program.

"Too many pedestrians feel the two white lines of the crosswalk are all the protection they need from automobiles. Actually, it would take a 'stone wall,' such as we have here, to stop a car," said William A. Feathers, managing director of the Safety Council.

"Crosswalks are not lined with walls to stop cars. Pedestrians have to remember to stop, look and listen," Police Sgt. Gene Corr said.

Police cited 460 Seattle citizens for pedestrian violations in November.

## Conference On Aged Will Include Safety

Fire safety and accident prevention will be among the items to be covered in the National Conference on Nursing Homes and Homes for the Aged in Washington, D.C., February 25-28. The Conference is being called by the U.S. Public Health Service.

The National Safety Council will be represented at the Conference by Doris E. Mersdorf of the Home Safety Division.

The importance of accident prevention among older adults is indicated by the fact that more than one-half of the fatalities from accidents in cities occur in the home and at least one-half of these victims are 65 or older.

Early in 1958, the NSC will have  
—To page 60

# Support for The President's Action Program

**T**HIS MONTH the friendly traffic cop pictured on this page is admonishing school kids in hundreds of western grade schools to look both ways when crossing—and never, never run into the street!

In Junior and Senior high school grades, another message on safety is being posted to caution teenagers against the perils of careless driving.

These daily reminders, it's hoped, may some day be responsible for saving many youngsters' lives. They have been distributed by Standard Oil Company of California as part of its traffic safety education program, and represent the kind of support businessmen are giving to the Action Program of President Eisenhower's Committee for Traffic Safety.

Businessmen in increasing numbers are wholeheartedly supporting the work of national, state, and local safety organizations where they exist, and helping to establish safety organizations where they are lacking. Standard's president, T. S. Petersen, for example, serves as one of the nine members of the President's Committee, works with the committee's 30-man Business Advisory Panel, and also helped organize and is a director of the California Traffic Safety Foundation. The latter group, typical of safety groups generated with a boost from businessmen, has in turn been able to establish 19 more organizations at the county level to promote traffic safety and cooperation with traffic law enforcement agencies.

In further support of the nationwide safety effort, Standard last fall launched a new education



**SAFETY REMINDERS** issued by Standard Oil of California. Upper left is for classroom bulletin boards in junior and senior high schools; upper right for grade schools. Below is a 30-sheet outdoor advertising panel, displayed at 500 locations in seven Western states.

program designed to develop traffic safety consciousness in a broad segment of the western public. The program was timed to have its greatest impact just prior to the winter holidays, and again during next summer's vacation driving season.

Standard's six-phase program includes the following elements:

**Outdoor Advertising:** This is the principal phase of the program directed toward the general public. It employs 30-sheet outdoor advertising panels which were posted with safety messages for the month of December, 1957, and will be posted again in July. Approximately 500 panels seen by a total of five million people daily are being used by Standard in the seven western states.

**Radio Announcements:** To supplement billboard coverage, the

program includes spot radio announcements on Standard's farm and news broadcasts throughout the West. The Standard School Broadcast, which is heard by more than 1,750,000 students and adults, is also carrying the announcements.

**Bulletin Board Poster:** Classroom bulletin board posters, described earlier, serve as an aid to traffic safety education in western schools.

**Customer Leaflet:** Standard also plans to carry the safety message to its customers with a leaflet to be included with the June, 1958, monthly billings. The message likewise will go out with free travel service routings mailed to motorists during the summer of 1958.

—To page 136



## INFORMATION FOR SAFETY DIRECTORS

about improved products and new services  
made possible by DU PONT CHEMICALS

**H**ERE are ways you can get *extra value* for your purchasing dollar. These modern products, which bring new safety and efficiency to your operations, are made possible by Du Pont Chemicals used in their production.

The three shown here are examples of many new and improved products in which Du Pont Chemicals play a part. Ask your regular suppliers about them, or send the coupon below to get more information including names of manufacturers from whom these products can be obtained.



**Chemical control of weeds** with Du Pont TELVAR® weed killers removes fire hazards due to vegetation around factories, storage tanks, warehouses, rail sidings, etc. Nonflammable, noncorrosive "Telvar" has minimum hazard for humans and animals, yet is deadly to plants, weeds, vegetation.



**New safe-handling features** of Du Pont Reagents: *Safety grip* on 5-pint bottles provides a secure hold for lifting, pouring. *Matching color-coded caps and labels* provide unmistakable identification. *Dripless sleeve* prevents dangerous acid dribbling. Order Du Pont Reagents from your nearest Grasselli sales office.

**DU PONT**  
**Grasselli Chemicals**



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**Work shoes and gloves** are safer and more comfortable when made with leather processed by Du Pont Quilon® chrome complex. "Quilon" gives leather resistance to water, corrosive chemicals, perspiration—yet leather stays soft, pliable. Du Pont does not make leather or shoes, sells "Quilon" to tanners for use in processing.

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Please send me your new folder, "Information for Industry." I'm particularly interested in the items checked:  
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Circle Item No. 15—Reader Service Card



## Oil and the Atom

—From page 20

monitor in the operations room. In addition, a powerful periscope mounted in the cell wall affords a close-up look of operations anywhere in the hot cell area.

Air in the hot cell is changed automatically every two minutes. All gamma radiation experiments are prepared in an area just outside the labyrinth entrance to the hot cell. The area is separated

from the hot cell by a 5000-lb. electrically-operated lead door.

A monitor in the operating room keeps a constant check on hot cell operations. It features warning lights, radiation monitoring devices, and detectors. Electric interlocks keep the hot cell door locked so that no one can enter the cell while the elements are out of the pool. An automatic carbon dioxide extinguishing system swings into action if the temperature gets too high in the laboratory.

**Personnel supervision.** Each man working in the radiation laboratory wears a small film badge and carries an instrument that looks like a fountain pen. The film badge contains a strip of unexposed photographic paper which darkens when exposed to radiation. The more radiation, the darker the negative. The badges are sent to a service company where they are developed and recorded, affording a constant check on each employee's radiation exposure.

The pen-like instrument is worn in the coat or shirt pocket and shows total accumulation. It is checked for radioactivity in a portable survey meter during the day and at the end of each working day. At no time is anyone allowed to have more than 5/100 roentgen, which is about one sixth the limit recommended by the Atomic Energy Commission.

**Plant monitoring.** Other protective instruments used in the laboratory include a Geiger counter and scaler for monitoring radiation in the air and meters for checking alpha, beta, and gamma radiation in the general area and on table tops.

These multiple checks on the air, equipment, areas, people, and clothing make the Ponca City laboratory among the safest of the company's installations.

## Safety Last—Or None at All

Daniel M. O'Connell of Chicago, one of 40 American students who spent seven weeks in Red China, in an article in the Chicago Tribune, had this interesting comment on the Reds' attitude toward safety.

"In their attempts to increase worker productivity, the Reds have disregarded safety measures such as protective glass, clean floors, tool covers, and hard toe shoes."

He quotes a Mukden periodical which illustrates this unique Red theory: "Safety and production always stand in opposition to each other. When production tasks are heavy, all efforts are devoted to emergency production and there is no time to attend to safety work."

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**LITTELL**  
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SUSPENDED  
VACUUM SHEET  
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Based upon a 4 to 1 safety factor, the 4 Cup Sheet Lifter has capacities of more than 1,000 lbs. Other models available.

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14" diameter herringbone faced cup with neoprene rubber. A



Standard cups in neoprene or gum rubber sizes 3/8" to 5".



Rectangular cups with neoprene rubber molded on steel backing plate. Sizes 2 1/2" x 8 1/2" and 3 1/2" x 16".



Molded on steel backing plate equipped with 4 mounting holes. Other designs for 6 to 10" diameter available. F

▼ As shown in top illustration.

▲ As shown on Pres-Vac.

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**Emergency? Bad conditions? Wet, messy job?**

**You need Thom McAn's**

**moisture-resistant safety shoes!**

**I**T's midwinter—and something goes wrong! That's the time your men will be glad they're wearing Thom McAn's special moisture-resistant safety shoes.

Look at the shoes in the picture. They're Thom McAn's two latest safety shoes—specially designed to keep liquids out, feet dry, safe, and healthy. They automatically *shed* any liquid that touches them! They're approved by leading buyers in plants all over the country.

**S-1014 Matte Black.** *Bavon*<sup>†</sup>-treated uppers. *Bavon*-ized leather is certified up to 250 times more resistant to water penetration than ordinary leather. Dacron<sup>\*</sup>-stitched. Steel toe box. Neo-cord sole and heel.

**S-4115 Matte Brown.** Quilon<sup>\*</sup>-tanned leather uppers by DuPont. Guaranteed highly resistant to water and chemicals. Dacron<sup>\*</sup>-stitched. Steel toe box. Neoprene sole and heel.

**BUY THEM THREE WAYS:** **1.** Directly from Thom McAn warehouses for plant inventory, or on mail-order basis. **2.** Through Thom McAn's special In-Plant Fitting Plan. **3.** At Thom McAn Shoe Stores. Send today for details on Thom McAn's special moneysaving plans—plus a full description of the new Thom McAn Safety Shoe line.

Write: Thom McAn Safety Division, 25 West 43rd Street, New York 36, N. Y.

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\* Reg. Trade Mark. E. I. Du Pont de Nemours & Co., Inc.

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# Thom McAn

## SAFETY SHOES

A Division of Melville Shoe Corporation

Circle Item No. 17—Reader Service Card

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58-B



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Many former users of harsh hand scouring powders have switched to PAX-LANO-SAV HEAVY DUTY® Granulated Skin Cleanser to avoid the skin chapping conditions brought on by poorly compounded hand cleansers. They have found that PAX-LANO-SAV HEAVY DUTY actually costs less to use than low-cost-per-pound cleansers...and in addition they get all of these extra benefits Winter and Summer:

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Circle Item No. 18—Reader Service Card

## Form New Group for Thermonuclear Research

A new and unusual combined engineering staff organization known as C Stellarator Associates has been established by the Allis-Chalmers Manufacturing Company and the Radio Corporation of America to design and build a facility at Princeton University for advanced research into controlled thermonuclear reactions.

The selection of the two companies to carry out the project was announced recently by Princeton University and the Atomic Energy Commission. The installation, known as the Model C Stellarator, is based on the original concept of Dr. Lyman Spitzer, Jr. Since 1951 an AEC-sponsored program has been headed by Dr. Spitzer at Princeton University, with the objective of exploring means to harness the energy of nuclear fusion for peaceful purposes. The C Stellarator, to be located at the University's James Forrestal Research Center in Princeton, is scheduled for completion in 1960.

Project manager will be Leonard J. Linde, director of electrical engineering, Allis-Chalmers. Edward W. Herold, director of Electronic Research Laboratory, RCA, will be assistant manager.

Commenting on the joint project, Linde and Herold characterized the effort as "an extremely ambitious one involving a number of unprecedented large-scale engineering problems."

"The device will comprise a gas discharge in which it is hoped to generate temperatures as high as many millions of degrees," they said. "This is expected to provide the basic physical data necessary to achieve the design of still more powerful devices directed toward the design of fusion-power reactors. Such reactors, if achievable, would be free of the dangerous radioactive wastes which result from uranium or plutonium fission.

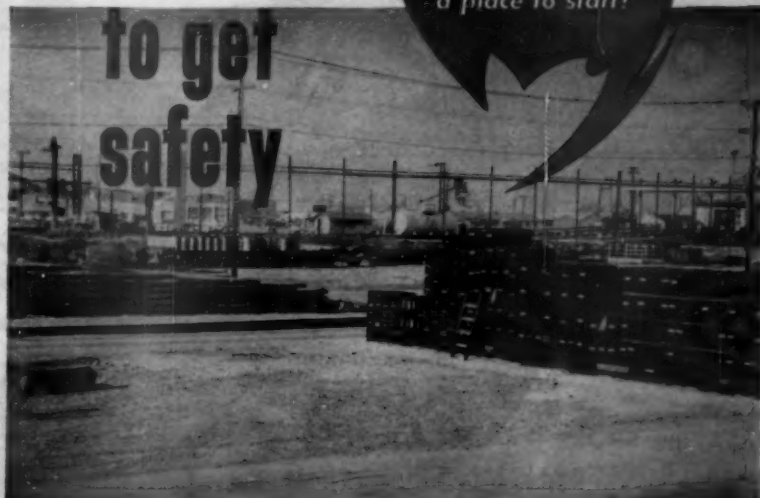
"Since it is known that the sun and stars produce vast amounts of energy by a fusion power generating process, the proposed earth-bound system may be thought of as a stellar generator, or stellarator."

National Safety News, February, 1958

# destroy weeds to get safety



SPARKY says:  
Don't give FIRE  
a place to start!



*new chemical kills weeds and grasses  
...prevents regrowth a full season!*

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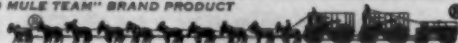
Here's the weed killer that's *specialized* for you! Yes, UREABOR was developed specifically to combat industrial weed problems and has proved effective. Maintenance men cheer this ready-to-use, dust-free granular weed killer—it's so convenient, so easy to apply dry. Effective rates of application are low—1 to 2 lbs. per 100 sq. ft. And, for treating large areas, special spreaders are available in both hand-operated and power-driven models. To learn more about UREABOR, write for literature today.



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# THE SAFETY LIBRARY



**Books, pamphlets and periodicals of interest  
to safety men**

**Compiled by Ruth Parks, Librarian, NSC**

## Defense Against Fallout

*Biological Effects of Whole-Body Gamma Radiation on Human Beings*, by Harold O. Davidson, The Johns Hopkins Press, Homewood, Baltimore 18, Md., \$3.00.

THE AUTHOR makes use of existing radiation knowledge and biological evidence to extrapolate the theoretical results expected to be attained at higher radiation levels. This is done so that various civil defense problems involving radioactive fallout can be evaluated. All problems are interpreted on a military basis so that radiation dosages discussed are considerably above peacetime levels.

The subject matter is limited to the discussion of external gamma whole-body radiation. Civil defense problems involving radioactive fallout are evaluated in terms of shelter, evacuation, brief exposures at high radiation intensities, and resumption of habitation in a contaminated area. There is also a discussion of delayed radiation effects and their bearing on fallout defense. Thirty-five pages of appendices describe the theoretical approach used to bridge the gap between known radiological facts and conjecture.

E. L. ALPAUGH

## Noise Control Handbook

*Handbook of Noise Control*. Edited by Cyril M. Harris, 1,184 pages, 700 illustrations, published by McGraw-Hill, New York, 1957, \$16.50.

THIS VERY comprehensive handbook covers many phases of noise and noise control. A large number of experts contributed to this work, which was edited by Cyril M. Harris of Columbia University's Research Laboratories.

In general, the material presented relates to "properties of sound, effects of noise on man,

vibration control, instrumentation and noise measurement, techniques of noise control, noise control in buildings, sources of noise and examples of noise control, noise control of machinery and electrical equipment, noise control in transportation, community noise, and the legal aspects of noise problems."

Some of the specific types of noise sources discussed are gears, bearings, fans, heating and ventilating systems, automobiles and trucks, and aircraft. In addition, there are sections on legal liability for loss of hearing, anti-noise ordinances, and noise control re-

## ADDRESSES OF MAGAZINES MENTIONED

READERS ARE ASKED to send their requests for magazines to the publishers, rather than to the NSC Library, which is unable to fill such orders.

*AMA Archives of Industrial Health*, American Medical Association, 535 N. Dearborn St., Chicago 10.

*Aviation Week*, McGraw-Hill Publishing Co., 330 W. 42nd St., New York 36.

*Canadian Mining Journal*, Garden-vale, Que., Canada.

*Coal Age*, McGraw-Hill Publishing Co., 330 W. 42nd St., New York 36.

*Fire Engineering*, Case-Shepherd-Mann Dept., 305 E. 45th St., New York 17.

*Hospital Management*, 105 W. Adams St., Chicago 3.

*Hospitals*, American Hospital Association, 18 E. Division St., Chicago 10.

*Industrial and Engineering Chemistry*, American Chemical Society, 20th and Northampton St., Easton, Pa.

*Industrial Medicine and Surgery*, 605 N. Michigan Ave., Chicago 11.

*Noise Control*, Acoustical Society of America, Prince and Lennon Sts., Lancaster, Pa.

*Railway Age*, Simmons-Boardman, Orange, Conn.

*Supervision*, 1 Waverley Pl., Madison, N. J.

*Timber of Canada*, Monetary Times Printing Co., 2052 St. Catherine St. W., Montreal, Que., Canada.

quirements in building codes that contain much valuable information.

The handbook will be a handy reference source because of the large number of references given. For example, the section on "Ear Protectors" lists 44 references and the section, "Effects of Noise on Speech," has 93 references. This is a high quality handbook both in physical make-up and material content and should prove helpful to people concerned with almost any kind of noise problem, legal or technical.

E. L. ALPAUGH

## BOOKS AND PAMPHLETS

### Aeronautics

*The Problem of Bogus Parts*. Joseph M. Chase, Flight Safety Foundation, 468 Fourth Ave., New York 16. 1957. 12p.

### Chemicals

*Benzyl Chlorides*. Manufacturing Chemists Association, 1625 Eye St., N. W., Washington, D. C. 1957. 15p. Chemical Safety Data Sheet SD-69. 30c.

### Gratings

*Metal Grating Handbook*. Metal Grating Institute, One Gateway Center, Pittsburgh 22, Pa. 1957. 28p. \$1.00.

### Marine Industry

*Handbook of Cleaning Practices*. Bureau of Ships, Navy Department. 1957. NAVSHIPS 250-342-1 \$1.25. For sale by the Superintendent of Documents, Washington 25, D. C.

## MAGAZINE ARTICLES

### Aeronautics

"British Crash Tied to Lax Check Flights." *Aviation Week*. Dec. 23, 1957. p85-95.

### Fire Protection

"Armstrong Cork Adopts Training-by-Doing." *Fire Engineering*, Nov. 1957. p1126-1127.

"Fire Prevention and Control." S. M. MacCutcheon, *Industrial and Engineering Chemistry*. Dec. 1957. p81A-83A.

### First Aid

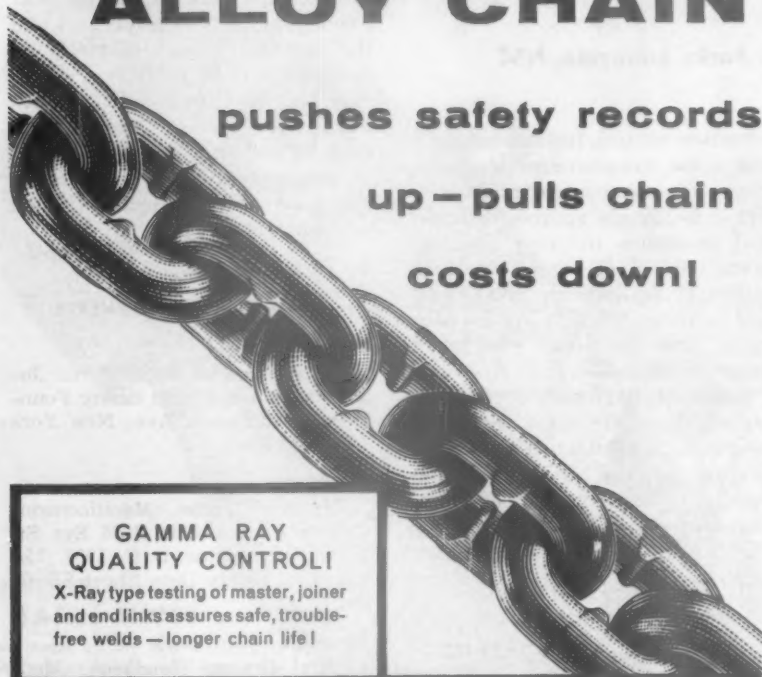
"First-Aid Measures in Poisoning." *United States Armed Forces Medical Journal*. Dec. 1957. p.1780-1782.

### Gas Industry

"Gas Utility Distribution Systems." Association of Casualty and Surety

# TM Triple-Safe

## ALLOY CHAIN



**pushes safety records  
up — pulls chain  
costs down!**

### GAMMA RAY QUALITY CONTROL

X-Ray type testing of master, joiner and end links assures safe, trouble-free welds — longer chain life!

### CONTROLLED ATMOSPHERE HEAT-TREATING

on all popular alloy chain sizes provides uniformity throughout the sling assembly.

### EXCLUSIVE PATENTED TAYCO HOOKS!

I-Beam type design . . . alloy steel construction and unique recessed grip mean extra safety!

**REGISTERED!** You get a certificate of test with every TM Alloy Chain. It bears the chain's guarantee . . . proof test . . . serial number.

You alleviate the squeeze on profits and tighten your grip on safety when you switch to TM Alloy Steel Chain. Gamma Ray Quality Control . . . Controlled Atmosphere Heat-Treating . . . new patented Tayco Hooks make it *Triple-Safe*—last many times longer than low-carbon steel chain. Never requires annealing! Tough— withstands abrasion, shock, grain-growth and work-hardness. Get *all* the facts! Write for Bulletin 13 right away!

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S. G. TAYLOR CHAIN CO., INC.  
Plants: Box 509, Hammond, Indiana  
806 Smallman St., Pittsburgh 1, Pa.

Companies, 60 John St., New York 38, N. Y. 1952. Special Hazards Bulletin Z-103. Vol. X-1957, pp20-23.

### Health

"Acute Toxicity of Yttrium, Lanthanum and Other Rare Earths." Granvil C. Kyker and Edgar A. Cress, *AMA Archives of Industrial Health*, Dec. 1957. p475-479.

"Boron Hydride (Borane) Intoxication in Man." Harry J. Lowe and Gustave Freeman, *AMA Archives of Industrial Health*. Dec. 1957. p523-533.

"Cutaneous Reaction to Fiberglas." Eldred B. Heisel and John H. Mitchell, *Industrial Medicine and Surgery*, Dec. 1957. p547-550.

"There's No Immunity to Death by Asphyxia." John B. Dunne, *Supervision*. Dec. 1957. p18-20.

### Hearing

"Hearing Conservation in Industry." Edward G. Meiter, *Noise Control*. Nov. 1957. p38-414.

"Medical Aspects of Automation." Charles C. Merckel, *Industrial Medicine and Surgery*. Dec. 1957. p541-546.

"Methods for Conservation of Hearing." Howard P. House, *AMA Archives of Industrial Health*. Dec. 1957. p445-448.

"What Constitutes Disability and How It Is Measured." Hallowell Davis, *AMA Archives of Industrial Health*. Dec. 1957. p454-458.

### Hospitals

"Cooperation Leads to Safety for Hospitals' Patients and Firemen." Sister M. Henrietta, *Fire Engineering*, Nov. 1957. p1120-21.

"The Engineers' Responsibility for the Security Features of the Hospital. Part I." Robert W. Walker, *Hospital Management*. Jan. 1958. p56-57+.

"Fires and Explosions." George J. Thomas, *Hospital Management*. Jan. 1958. p55+.

"A Good Safety Record Calls for Action—And Maybe Money." John Morris, *Hospitals*. Nov. 16, 1957. p68-70.

"Occupational Hazards That Can Be Overcome." George S. Michaelson, *Hospitals*. Nov. 16, 1957. p72-76.

"Radiation—Helpful Friend and Deadly Enemy." Ralph O. Wollans, *Hospitals*. Nov. 16, 1957. p76-80.

"Real Fire Training Is Real Life Insurance." Robert McGrath, *Hospital Management*. Jan. 1958. p52-53+.

### Mines

"Maintenance and Installation of Mine Fans." D. J. McParland, *Canadian Mining Journal*. Nov. 1957. p95-97.

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—From page 49

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## Urge Revised Standards For Nuclear Power

SAFETY STANDARDS for the U.S. nuclear power program should be revised now, much in the same way as the safety standards for the radium industry were modified when the nuclear program of the Manhattan Engineering District was set up, two U.S. Navy



radiologists said recently in San Francisco.

They are Dr. Paul C. Tompkins, scientific director, and Myron B. Hawkins, head, Technical Development Branch, U.S. Navy Radiological Defense Laboratory, San Francisco, who presented a paper at the Eighth National Conference on Standards at San Francisco's St. Francis Hotel on possible hazards of radioactive deposits from the atomic energy power program.

The conference was held in conjunction with the 39th annual meeting of the American Standards Association, which was host to several hundred engineers, business executives, and government officials attending the three-day meeting.

Emphasizing that these were their personal opinions and did not reflect official Navy Department views, the authors in their paper stated that the tremendous quantities of toxic materials which the nuclear power program would undoubtedly produce would not necessarily be a problem to the population or to technical processes if satisfactory controls could be developed.

Although sudden accidents would cause serious local hazards, they are unlikely to happen under the present design safeguard on atomic reactors, the authors stated.

On the other hand, they believe that constant small discharges of radioactive material may create increasingly serious health and technical problems, not unlike those discussed in connection with nuclear weapons test.

"The acuity of long-term environmental problems must be determined and the necessary research and development must be initiated to insure a livable environment in the future," they said.

The key to the practical development and utilization of atomic power is the concurrent consideration of both the economical and safety factors, the authors concluded.

Messrs. Tompkins and Hawkins presented their paper at the session concerned with control through standards of exposure from ionizing radiation.

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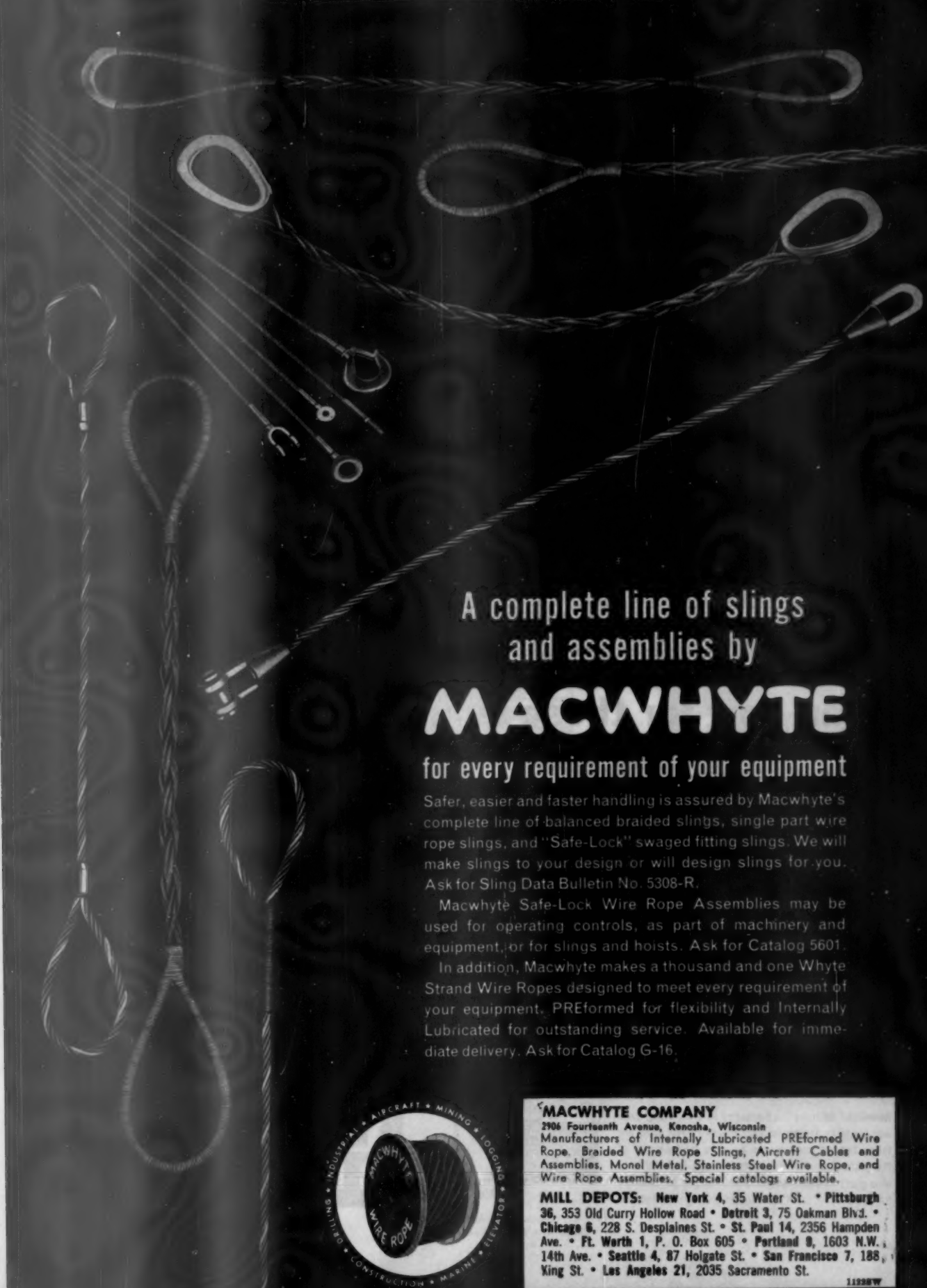
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# The Journal

## OF THE AMERICAN SOCIETY OF SAFETY ENGINEERS

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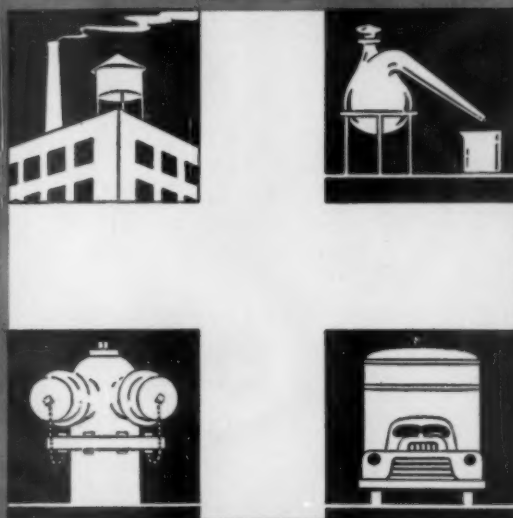
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**E**ACH time a new chapter is chartered, the American Society of Safety Engineers passes another milestone toward its constantly expanding goals of human service and the professional advancement of safety engineering . . . Such a milestone was passed again just this last month when the Great Plains Chapter, with headquarters in Omaha, Nebraska, became the first chapter to be admitted into the Society's "family" in 1958 . . . The addition of well organized, enthusiastic new groups of professional safety engineers to chapter status has become a very pleasant habit for the Society. Three chapters were admitted in late 1957 and just a year earlier three other new chapters were placed on the Society's rolls . . . This strong, steady growth indicates, as perhaps nothing else could, the basic need for the Society in the safety movement and the highly satisfactory manner in which the Society consistently has answered this need . . . That is why we are particularly proud to list, on the inside back cover of this issue, the 68 chapters of the American Society of Safety Engineers.—Editor

## Our President Speaks on SAFETY

**T**HE AMERICAN people were startled, to put it mildly, by the U.S.S.R.'s successful launchings of Sputniks I and II. Following closely was the United States' failure in its satellite-launching attempt on December 6 at Cape Canaveral, Florida.

Fortunately, public reaction to these unhappy incidents seems, on the whole, to be constructive, for apparently the bad news of late 1957 has touched off a 1958 drive, unprecedented in its determination, to further the educational program of the nation, particularly in the areas of the exact sciences.

It is almost impossible to comprehend all that this drive may mean, ultimately, to our country—and to the world—in terms of scientific advancement. Already modern discoveries have been revolutionizing our world, technologically speaking, with somewhat bewildering

rapidity. In just the last two years, it seems, we have gone from the machine age through the age of electronics, the atomic age, the nuclear age—and now we find ourselves more or less hurled into the space age.

With a concentrated drive underway to create more opportunities for learning through scholarships and other assistance programs, to broaden curriculums, improve already-successful teaching methods, attract additional qualified and able faculty and emphasize the importance of every phase of education, we most surely will achieve results bearing all the appearances of miracles.

Most surely the next decade will see developments—as yet unthought of—which will completely change our mode of travel and many or all of our manufacturing processes. These changes cannot help but create a need for corresponding changes in the arts and sciences of safety engineering.

To go even further, the field of occupational safety is being presented with a new, a limitless challenge. Our world has entered an era of scientific advancement which in a few years may dwarf all the present accumulated knowledge of man. We cannot be content, as safety engineers, merely to keep pace with changing methods. To fulfill our professional responsibility we must, in the development of safety engineering technology, match industrial progress with progress in the saving of life, limb and property to the final and certainly as yet unrealized goal, virtual elimination of accidents.

We have a truly magnificent challenge—and opportunity—before us in the safety field. How well we meet the challenge, how fully we take advantage of the opportunity, will depend on the contributions each one of us is able and willing to make: how thoroughly we prepare ourselves, through study and research, to do our jobs; how enthusiastically we devote ourselves, in our professional and community lives, to the practical realization of our ideals.

*John F. Juli*

**John F. Juli, President  
American Society of Safety Engineers**





by **Morehead Patterson**

**I** AM SURE you all remember the story of Horatius at the bridge—three Romans successfully defending a narrow defile against a large army. It seems to me that the 7000 members of the American Society of Safety Engineers are like the three Romans—that all the best brains in the country are trying to make the world unsafe against the best efforts of the Society to keep things safe. This situation is not new; it has been going on for a long time.

In the early days of railway transportation there were those who claimed that trains could not be operated faster than 15 miles per hour because the lungs of the passengers would blow up.

The age of aviation brought us untold dangers which have been met with reasonable safety.

There is no denying the fact that there is something in atomic energy which is lethal and that we must take precautions. Nevertheless, people live through dangers all the time and for my money I would rather live near an atomic plant than in Simsbury, Connecticut, where they make explosives. Actually the safety record in atomic plants is very good. At present we have the controversy regarding the relative safety of the English gas cooled reactor and the U.S. water or heavy water cooled reactor. Each claims the other is dangerous. Personally, I think neither is dangerous if properly handled.

Plutonium, in the hands of an irresponsible man, would be a real hazard politically. Probably Caesar would have enjoyed having some plutonium. We have

## Standardization in the Field of Nuclear Energy

to live with these things. People who live on Mt. Aetna live in constant danger of lava flows.

We must guard against public hysteria and we must have government law to provide insurance. You all remember the three airplane crashes we had in Elizabeth, New Jersey. We do not want anything similar to that in the atomic industry; it would set us back a long way. The AEC rules and regulations are very adequate and we owe our fine atomic safety record to them. Standardization will make things simpler, will cut costs and get the job done.

In the past many standards have been created to iron out difficulties which have arisen through the lack of standards, but the idea of being forehanded and trying to prevent trouble, rather than correct it, has been basic in all operations of the original Nuclear Planning Committee of the American Standards Association and its successor, the Nuclear Standards Board. The fact that nuclear energy is a new field and that it cuts clear across industry has been foremost in our minds. Reactor builders, construction firms, insurance companies, fabricators of all kinds of materials and fittings which are parts of nuclear energy devices, labor, public health authorities and many other activities are awaiting eagerly the creation of standards in their particular fields. Unless some national standards are established soon, each state or municipality will establish its own standards and the chaos which will result will be worse than the divorce laws of the 48 states.

There are some people who feel that it is too early

---

*Morehead Patterson is shown above as he delivered the principal address at the Annual Meeting of the American Society of Safety Engineers, held in the Grand Ballroom of the Conrad Hilton Hotel, Chicago, October 22, 1957. The text of his speech is published on these pages.*

*Mr. Patterson, who is president and chairman of the board, American Machine and Foundry Company, serves as chairman of the Nuclear Standards Board, American Standards Association. Also, he was chairman of the July 29-August 1 meeting of the Nuclear Energy Technical Committee of the International Organization for Standardization, held in Geneva, Switzerland.*

---



to do anything about nuclear standardization now because we know so little about the effects of nuclear energy. Granted that the newness of the field prevents perfection, we nevertheless must at least analyze the problems which confront us and establish basic principles which may be refined as knowledge increases and experience dictates. It is better to go ahead with the knowledge we possess and establish something to go by, rather than to wait and do nothing until we think we know it all. That time will never come. There should be no vast changes in safety measures. We should specialize in those things peculiar to nuclear energy.

To consider the need for national standardization in this field, a general conference was held in Washington, D. C., on December 8, 1955. The conference was attended by 175 prominent people representing 120 different interested organizations. After long discussion it was unanimously agreed that there was great need to develop nuclear standards and further that the American Standards Association should "appoint a Planning Committee to study urgently the question of standardization in the field of nuclear energy in detail and report back to the conference as soon as possible."

At this point, for the benefit of those who are not familiar with the organization and procedures of the American Standards Association, I would like to describe them briefly.

The ASA is a non-profit organization supported principally by member-bodies and sustaining members. Member-bodies are organizations of national scope such as the Manufacturing Chemists Association, the National Safety Council and the Atomic Industrial Forum. They are the active voting members. The principal group of sustaining members are known as company members. They share the benefits but have no vote and are not represented on any of the ASA operating agencies.

The ASA has a Board of Directors and the usual officers for administrative purposes but the actual standardization work is under the control of the Standards Council. The Council divides its work among 14 Standards Boards of which the Nuclear Standards Board is one. (Incidentally, the first Standards Board was the Safety Standards Board organized in 1920.) A Standards Board in turn breaks up its work into projects and turns these projects over to Sectional Committees which actually do the pick-and-shovel work.

A Sectional Committee may have from 12 to 50 members chosen to represent all important organizations interested in the project. Each Sectional Committee has a sponsoring organization, selected by the parent Standards Board, whose job it is to monitor the work of the committee. The Sectional Committee actually prepares the standards and before submitting them to the parent Standards Board, through the sponsor, must assure itself that a consensus has been reached. That means that every interested organization has had a chance to study a suggested standard and that there is practically universal approval.

The Standards Board itself does not pass on the technical aspects of the standard but passes judgment only on whether or not a true consensus has been obtained. If not, it will send the suggested standard back. If satisfied, the Standards Board will approve and pass on the standard to the Standards Council for final approval as an American Standard. There are two other ways

which are sometimes used to secure standards, but I will not take time to describe them because the Sectional Committee method is the normal procedure for development of safety standards.

Now to return to my story—

The ASA Nuclear Planning Committee held its first meeting on February 15, 1956. Twenty-five national organizations were represented on the committee. I won't take time to go into the details of the meetings or the formation of subcommittees, etc. Suffice it to say that on May 2, 1956, the committee submitted its report to the general conference, recommending the establishment of a Standards Board, within the framework of the American Standards Association, which would have approximately the same representation as the Planning Committee and with a scope as follows:

"The scope of the Nuclear Standards Board will be the administration and planning of national standardization work in the field of nuclear energy. The Nuclear Standards Board will be assigned primary jurisdiction over such work within its field as does not fall in the field of an existing Standards Board and secondary jurisdiction over those projects which are already assigned to a present Standards Board. This secondary jurisdiction is to be for the purpose of insuring coordination. The technical work will be placed in the hands of existing Sectional Committees and existing committees of other organizations to the maximum possible extent."

The new Nuclear Standards Board held its first meeting on September 18, 1956, and has met several times since. As finally constituted it represents 32 national organizations, ten of which are technical societies, eleven are industrial organizations and five are governmental agencies, plus the Bureau of Explosives, the Conference of State and Provincial Health Authorities, the International Association of Government Labor Officials, the National Safety Council, the AFL-CIO and the American Public Health Association.

With one exception, the work of the Board so far has been to establish projects, select sponsors and organize the Sectional Committees to implement the projects.

The projects which have been set up are as follows:

#### **N1—Glossary of Terms in Nuclear Science and Technology**

This is the one exception in the work of the Board to date to which I referred. This glossary, which had been under preparation for a number of years by the National Research Council, was the first proposed standard considered by the Nuclear Standards Board and was processed by an existing standard method which is shorter than the Sectional Committee method which I described to you. It was approved as an American Standard on June 5, 1957, with the realization that it was imperfect in some aspects but at least it would meet the urgent demand for something to go on. It was also approved with the understanding that revision would be started at once. This revision is under way.

#### **N2—General and Administrative Standards for Nuclear Energy**

Briefly, this project covers terminology, definitions, color codes, symbols, qualifications of professionals, accountability, records and reporting procedures.

The sponsor is the Atomic Industrial Forum.

A Sectional Committee has been organized and has met several times. Its main work at the present time is the revision of the glossary.

### **N3—Nuclear Instruments**

The scope of this project covers the standards, specifications and methods of testing for instruments used in the nuclear field.

There has been a delay in determining a sponsor but recently the Institute of Radio Engineers was selected and I believe work will get under way soon.

### **N4—Electrical Requirements for Reactors and Nuclear Power Systems and in the Generation and Application of Nuclear Radiation**

The scope of this project covers standards, specifications and methods of testing electrical equipment used in the nuclear field.

Three sponsors were selected for this project; namely, The American Institute of Electrical Engineers, the Electric Light and Power Group and the National Electrical Manufacturers Association, which by agreement is the prime sponsor. Invitations have been sent out to various organizations to designate representatives on this Sectional Committee and an organization meeting is expected soon.

### **N5—Chemical Engineering for the Nuclear Field**

The scope of this project covers just what its name signifies.

The sponsor is the American Institute of Chemical Engineers. A Sectional Committee has been organized and has held one meeting. Subcommittees have been organized and work is under way.

### **N6—Reactor Safety**

This project is concerned with codes and standards which have to do with the safe operation of nuclear reactors, etc.—in brief, the prevention of accidents.

The joint sponsors are the American Nuclear Society and the American Society of Mechanical Engineers, which by agreement is the prime sponsor. A Sectional Committee has been organized and has held one meeting.

### **N7—Radiation Protection**

This project has to do with protection of personnel against the effects of radiation during any normal operation in which radiation is present.

The joint sponsors are the National Safety Council and the Atomic Industrial Forum, which by mutual agreement is the prime sponsor. A Sectional Committee has been organized and has held one meeting.

Internationally, progress has also been made. A year or so ago the International Organization for Standardization, commonly called ISO, decided to create Technical Committee No. 85 to cover standards in the field of nuclear energy. It held its initial meeting in Geneva three months ago.

The United States was assigned the secretariat and we were represented by a delegation of 15 members. There were over 70 delegates altogether, representing 17 countries and seven international organizations. I believe that many of the delegates approached the meeting with a feeling of skepticism and doubt that anything of

real value could be accomplished at this time. At the conclusion of the meeting, however, I talked with the heads of several of the delegations and I am confident that any misgivings they might have had initially were dispelled by the constructive work which was done and that the delegates left with an enthusiastic feeling of accomplishment.

There were two plenary sessions of the committee as a whole but the detailed work was accomplished by three working groups which were finally designated as permanent subcommittees. The subjects assigned these working groups were:

1. Terminology, definitions, symbols and units.
2. Radiation protection.
3. Reactor safety.

Of course, being a meeting to get organized and to establish programs of work to be accomplished, no recommendations were made for any specific standards, but initial steps were taken toward:

1. Development of a tri-lingual glossary—English, French and Russian.
2. Development of a warning symbol to indicate presence of dangerous ionizing radiation.
3. Adoption of units pertaining to nuclear energy—already developed by the International Commission on Radiation Protection and the International Commission on Radiological Units.
4. Development of symbols required for drawings.
5. Development of recommendations relating to measurement of and protection against radiation.
6. Development of acceptable guides for safe design, operation and maintenance of nuclear reactors.

At present there are few people in the nuclear business who are doing well. Companies are spending large amounts of money and still are trying to operate under the profit system. The business is fascinating and would be even more exciting to the companies if they did not need a profit. My own company treasurer and my bankers think I am having too much fun already.

The profit motive must come into nuclear energy. Right now there is no real demand for atomic power in the United States. Fossil fuels are so cheap and plentiful and engineering so good that atomic power is not needed and cannot be competitive at present costs. In the future, however, the demand for electric power will go up—will probably double every ten years from now on—and when the supply of fossil fuels diminishes the prices will go up. Radiation cannot be laughed off and prevention against it is costly but the time will come when atomic power will be competitive.

In closing, you can see from the brief summaries I have given you that standardization activities in the field of nuclear energy are now organized both nationally and internationally and work is under way. I hope that some standards will soon be forthcoming. Standardization work under the consensus principle is necessarily slow and in the nuclear field is further hampered because it is a new field and there are so many unknowns. As I said earlier in my talk, we want to be forehanded in this work and prevent confusion rather than to have to standardize later to correct difficulties which arise—the history of standards so frequently in the past. We must try not to be too late with too little but also we must be careful not to be too soon with too much—which could well stifle progress in industry.

*Experience in hundreds of industrial plants has demonstrated that . . .*

## ENERGY IN COLOR BENEFITS PLANT SAFETY AND MAINTENANCE

*by Thomas R. Donoghue*

**M**ODERN industrial plants with their mechanized tempo of production represent a far cry from the small, old-fashioned factory where produced material was distributed and work collected by hand trucks. Yet with today's highly mechanized plant, management is confronted increasingly with the important problem of safety and maintenance. If demand is to be met and full time operation assured, working conditions must be safe, efficient and orderly.

In past years industry has expended millions of dollars and a great amount of time and effort in promoting the physical welfare of employees. Frequently the changes recommended as a result of these time-and-motion studies appear on the surface to be trifling. The history of modern industry abounds in examples of trifles that have turned out to be of tremendous importance.

One such tremendous "trifle" is color. At first thought, it may be hard to believe that the colors on a machine, on a wall or on a traffic lane could have a marked influence on a worker's morale or his production efficiency.

As we know, unless there is light to create visibility, nothing can be seen in absolute darkness. The quantity, quality, character and color of the light are factors which determine the degree of visibility. But light must be reflected from a surface before that surface can be seen and good visibility, therefore, depends on good light and on a good surface that will reflect this light. Paint, properly handled, can provide that surface.

Not too many years ago factories were painted with little or no regard to the coordination of illumination and color. Paint was merely thought of as a covering agent, as a "protective" for wood, steel and other surfaces. Color was of our own selection, chosen simply with regard for what we thought was appropriate. Most ceilings and side walls down to contact height were



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painted white in order to obtain maximum light reflection. The contact area—that is, the doors, trim and wainscot—were painted in a dark color so as to camouflage dirt, grease and smudge. This color treatment often minimized the ineffectiveness of those responsible for housekeeping but it did not contribute much to a healthy or safe environment. Too, that form of plant treatment did nothing psychologically to encourage housekeeping on an individual basis.

Laboratory tests and practical experience have proved that there is energy in color which affects an individual's health, comfort, happiness and safety. The drab, bleak and inharmonious color schemes of yesteryear are being replaced by functional and attractive color patterns that are in keeping with modern advancements in machinery and methods.

The medical profession has long realized that colors can be used to stimulate or to depress: hence, the painting of hospital rooms and furniture to speed recovery of patients and also to enhance the working environment of the hospital staff.

### *Influences Workers*

Likewise, in modern factory operations it has been shown that some colors stimulate and invigorate employees, while others can be irritating and actually cause physical discomfort. Undoubtedly at one time or another you may have heard the expression, "That color seems to 'scream' at me." Some drab color may elicit the remark, "That color gives me a feeling of nausea." One color attracts attention while the other dulls it; some colors stimulate and others create an opposite effect.

By harnessing the power of color and directing that power to achieve definite predetermined ends, color can be used to serve industry—and safety—constructively. To use color purposefully, not from the standpoint of personal taste but from the standpoint of what it can be made to achieve, it is necessary to utilize the energy of color scientifically. Extensive research to develop and standardize the industrial use of color for the desired results has been carried out by the Pittsburgh Plate Glass Company.

This research has brought about the adoption, by the company, of basic principles of approach to color selection which the company calls "color dynamics." Color dynamics is intended to be more than mere styling with paints; its purpose is to harness, in a practical way, both the various attributes of color and the interesting visual illusions that can be created with color. Color has been utilized by leading hotels to impart an atmosphere of friendliness, comfort and good cheer. In offices, rooms have been made to seem more spacious and pleasing to the eye, contributing to the health and efficiency of employees.

### *Standardize Use in Plants*

Likewise, application of color dynamics principles by many thousands of industrial plants covering many fields all over the country, is bringing about standard use, in plant work areas, of colors which relieve eyestrain, offset nervous tension and physical fatigue, minimize time-loss hazards in absenteeism and otherwise improve the efficiency and safeguard the well being of the employee.

There is growing evidence that application of the principles of this science in painting factories and workrooms has produced uniformly beneficial results.

### *Industry Sees Benefits*

A leading producer of steel products has reported the effectiveness of its color dynamics program as follows:

1. *Safety:* The number of lost time accidents has been reduced by 38 per cent since the program started. Eyestrain and mental fatigue required in continuous attention to production units has been greatly reduced.

2. *Morale:* Improved employee morale is evidenced by reduction in absenteeism from approximately five per cent to less than two per cent since the beginning of the color program. Labor turnover has been reduced from approximately 4.5 per cent to .4 per cent.

3. *Production:* Machine efficiency increased from 86 per cent to 96 per cent, an increase of 10 per cent, a three year study has revealed.

Similar reports from many other industrial firms employing these color principles show that, as a result of the purposeful use of color in their plants, both management and labor benefit from (1) continuity of employment, (2) improved efficiency of operation, (3) quality of production maintained and (4) encouragement of the worker to practice good housekeeping and to have pride in his equipment and its care.

One of the more important results of industrial color has been in the field of safety. Every color and color combination in the safety color code, as developed at Pittsburgh Plate Glass using the color dynamics approach, has been selected for a definite purpose. In color coding for safety, a color combination can be used to obtain high visibility, making it easier for workers to see vehicles, machinery and equipment parts and to recognize hazards. Perhaps the simplest way to understand color dynamics—what it is and how it works—is to think of it exactly as the opposite of "camouflage," which means the use of colors on materials for the purpose of hiding, deceiving or obscuring. Safety color coding, on the other hand, should emphasize and reveal, or make things "stand out." It should attract attention.

### *Develop Safety Color Code*

Consequently, in coding for safety, color is used to draw attention of the worker to safety appliances and equipment as well as to unsafe conditions or accident exposure. This purposeful use of color in the safety color code is as follows:

**YELLOW**, a high visibility color, should be used as a band to mark busy aisles and moving objects overhead, such as cranes, chain hoist blocks, loading buckets, railings and curbs. Yellow with black stripes, used as parallel bars, should be employed to designate non-moving obstructions that create hazards of striking against, stumbling over or falling into, such as low beams and pipes.

**ORANGE** combines the vitality and intensity of red with the high visibility of yellow to produce a color which has more attention value than any other color. Orange should indicate dangerous parts or areas, such as exposed cutting edges, rollers and gears. Interior door



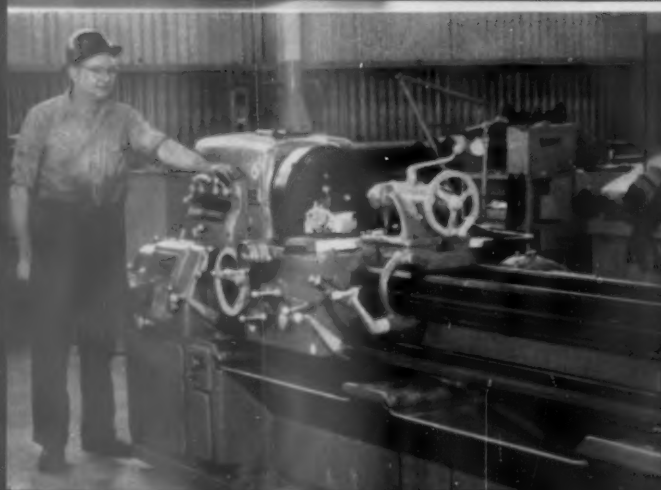


Figure 1—Use of color separates critical and noncritical parts of lathe. The body of the machine is an olive green and control levers and adjustment wheel spokes are beige (circular part of wheels is unpainted.) Tool post slide (focal area) is ivory and emergency stop and start controls are orange. All machined surfaces are unpainted.

Figure 2—Shaper body is painted olive while control levers are placed in strong contrast by painting them beige. Emergency stop and start switches are painted orange, a color which combines vitality and intensity of red with visibility of yellow.

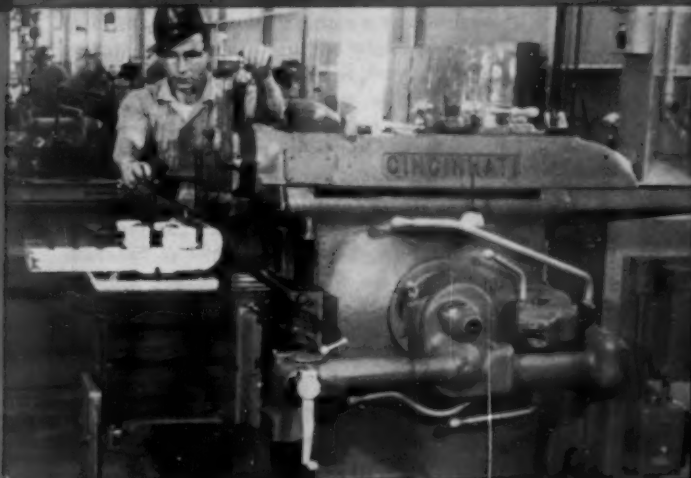
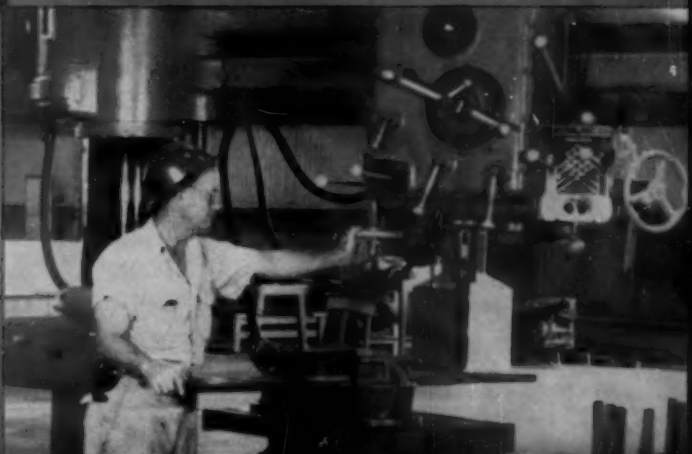


Figure 3—Beige grinder eye shields are shown in sharp contrast to olive body of machine.

Figure 4—Large number of controls on radial drill are effectively contrasted against olive machine body by painting levers and wheel spokes beige.



surfaces of electrical switch boxes, fuse boxes, power control boxes, machinery guards and mobile equipment at floor level, such as industrial power trucks, should be painted in brilliant orange.

GREEN, always associated with safety and medical practice, should be used to identify first aid rooms, stretchers, cabinets for gas masks, respirators, medical supplies and safety showers. The green cross has come to be the standard safety designation.

RED, the physical color associated with fire, should be used to identify the location of fire fighting equipment. When marking columns where fire extinguishers are located, band the columns near the ceiling and the floor, as well as the extinguisher location.

BLUE is suggested as a caution color. Blue tags, flags or light should be employed to warn against moving equipment on which work is being done. Blue discs also can be hung on machine controls when the machine is down for repairs. Also recommended is the use, in conjunction with the tag, of safety locks on control switches when working on machines or equipment. These discs or flags should be lettered, "Out of Order." The blue flag has been used as a standard on railroads for years for protecting repair tracks and for safeguarding car loading or unloading.

PURPLE should be the basic color for designating radiation hazards. Yellow should be used in combination with purple for markers such as tags, labels, signs and floor markers. (Radiation as used in this code applies to radiation types such as X-ray, alpha, beta and gamma.)

WHITE designates traffic flow, marks off storage areas, corners and floor areas around waste receptacles.

### *Show Application to Machines*

The illustrations which accompany this article show specific application of color dynamics and its color code to various machines commonly found in industrial plants—a lathe, shaper, grinder and radial drill. It will be noted that, although not listed as part of the code above, the colors BEIGE and OLIVE in all the illustrations, and the color IVORY in one, are mentioned as part of the color scheme in the explanations which accompany the illustrations.

Olive has been selected as the color for the non-critical expanses of the machinery because it is a quiet and pleasing color. Beige and ivory, used for some of the smaller parts of the machines which, although critical, do not fall into any of the general categories outlined in the code given above, were chosen for the dramatic but harmonious contrasts these colors provide against the olive green paint.

All machined surfaces on the illustrated machines are left unpainted.

### *Code Pipe Lines in Color*

Color is also used to great advantage in indicating at a glance the content of a pipe line. A code for pipe line identification is as follows:

RED designates fire protection materials and equipment and sprinkler systems.

YELLOW or ORANGE identifies dangerous materials,

such as acids, gases, steam at 212°F. to 800°F. and the like.

GREEN, GRAY, WHITE or BLACK marks pipes carrying safe materials, such as drinking water, compressed air and steam below 212°F.

BLUE indicates that the contents of the pipes are gases or liquids used as antidotes to dangerous materials.

PURPLE identifies pipes carrying extra valuable materials which are usually safe but of high value.

Originally, the entire piping system was painted the code color. It now is the practice to paint the piping system the same color as the ceiling or the walls and to identify the contents by painting the valves, flanges or couplings the code color appropriate for designating the material in the pipe. Some plants band the pipes when they enter or leave the wall or ceiling while others identify them with the use of colored tags or discs. The use of decals of the proper code color, lettered with the name of the material in the pipe, is preferable because this method leaves no doubt in anyone's mind as to what the pipe contains. Color coding serves as a caution signal to workmen and helps them to identify positively the pipe line on which they wish to work.

### *Can Bring Many Improvements*

A number of safety authorities maintain that the largest percentage of injuries occurring in industry today is the result of human failure. It has been found that, when the attitude of workmen toward their work is improved by better housekeeping (which will be encouraged by a more attractive and more vividly highlighted environment achieved through the intelligent use of color), a material reduction in accidents usually results.

By means of health promotion and vision screening programs, attempts are made to conserve and improve the visual acuity of employees. Although they may have excellent eyesight, if the working environment is dull and drab and not conducive to seeing clearly and sharply, the employees' surroundings will not be conducive to safe, efficient production.

The methods and the means for creating the desired visual conditions in plants are available today although they have been used only to a limited extent. The expanded use of color dynamics can provide safety benefits that will pay dividends to management and employee alike through a reduction in accident and injuries.

### *Use Proves Value to Industry*

The use of these color principles in industry has proved that there is much more to color than superficially meets the eye. Engineered color is producing definite worthwhile results in thousands of plants. Its success is due largely to the care and thought that has gone into the planning of the color application.

Admittedly, a few buckets of varied color paints applied in a plant is not the overall solution to industry's problems. On the other hand, carefully chosen colors, scientifically utilized, can do a tremendous job in helping to eliminate the increasingly important problem of safety and maintenance in the highly mechanized industrial plant of today.

# Are Disabling Injury Frequency Rates Valid and Reliable Measures?

by John V. Grimaldi, Ph. D.

**Editor's Note:** The May, 1957, issue of the Journal contained an article by Charles V. Culbertson, "Does the American Standard Method of Computing Frequency Rates Hide the Truth?" (page 18). This article was adapted and condensed from a previously-published article by the author ("Does This Standard Hide the Truth?" Magazine of Standards, January, 1957). Readers were asked to comment. So many letters were received that the Journal requested Dr. Grimaldi to write the following article, taking into account the various viewpoints expressed by readers, in an attempt to present a definitive approach to this controversial subject.

IN THE construction of a satisfactory measure, there are two important criteria to be met. One is *validity* or, in other words, does it evaluate what it purports to? The other is *reliability*, which requires that the measure produce similar results for identical situations when it is applied by any appraiser experienced with its technique.

Recently, the Journal adapted an article by a Society member, Charles V. Culbertson (see Journal of the American Society of Safety Engineers, May, 1957, p. 18) which originally appeared in the January, 1957, issue of the Magazine of Standards, published by the American Standards Association, under the title "Does This Standard Hide the Truth?" It challenged the accuracy of frequency rates as a measure of work injury experience. The author centered his question on the sensitive part of the American Standard Method of Recording and Measuring Work Injury Experience, Z16.1-1954, which defines *temporary total disability* and excepts those cases where the injured person can be assigned to a "regularly established job which is open and available to him." Culbertson argued that:

"The disabling injury frequency rate should measure the *total number of disabling injuries experienced*, not merely the ones that management could not accommodate with another job. The present definition has enabled

a large plant with a variety of jobs to experience an injury and return the man to a job while the small plant across the street, suffering the same injury, must tally it as a disabling injury."

There is a certain truth to the point made, although perhaps it would have been more proper to word the last sentence less positively. It must be recognized that the small plant also may be able to find a job for the injured worker, although it is probable there would be fewer openings to choose from.

The Z16.1 provision for deleting from the disabling injury accident total those cases which do not result in permanent impairment but can perform a regularly established job, has been controversial for some time. Any measure which allows discretion and circumstances to influence its use and results, will be questioned. The Z16.1 definition of *temporary total disability* introduces such a defect.

Many accident prevention professionals in industry have been dissatisfied with this provision because it is suspected that the interest of some colleagues is centered on working to find proper jobs for qualified injured employees and, thus, advantageously influence their frequency rates. The objective of reducing the rates by focusing effort on prevention of the accident is de-emphasized by this interest, it is alleged.

It might be worthwhile to examine, carefully, first the possibility that low frequency rates may be a function of a plant's ability to reduce its *temporary total disability* cases by returning a number to available jobs. Using 1952 United States Department of Labor injury-frequency rates for manufacturing industries by size of unit, which were the most recent available when this was written, a picture of how the small plant frequency rates compare with large plants appears in the table on page 10.

It is seen that the larger manufacturing groups truly



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SIZE OF UNIT	DISABLING INJURY FREQUENCY RATE	SIZE OF UNIT	DISABLING INJURY FREQUENCY RATE
Less than 20 employees: (a) No. of units included: 43 (b) Range: (c) Mean: (d) Median:	2.2 — 93.7 18.5 18.5	250 to 449 employees: (a) No. of units included: 131 (b) Range: (c) Mean: (d) Median:	2.4 — 100.9 17.4 17.4
20 to 49 employees: (a) No. of units included: 104 (b) Range: (c) Mean: (d) Median:	4.9 — 97.1 20.1 19.8	500 to 999 employees: (a) No. of units included: 116 (b) Range: (c) Mean: (d) Median:	3.3 — 80.6 13.7 13.6
50 to 99 employees: (a) No. of units included: 120 (b) Range: (c) Mean: (d) Median:	4.3 — 102.0 22.4 22.2	1000 to 2499 employees: (a) No. of units included: 90 (b) Range: (c) Mean: (d) Median:	0.9 — 40.6 9.8 9.6
100 to 249 employees: (a) No. of units included: 146 (b) Range: (c) Mean: (d) Median:	4.2 — 108.7 21.5 21.7	2500 or more employees: (a) No. of units included: 45 (b) Range: (c) Mean: (d) Median:	2.2 — 18.4 6.6 6.6

\* The "mean" and the "median" are both measures of central tendency but the mean, or arithmetic average, gives no quantitative indication of the rates, which are above or below the particular average referred to. In other words, the mean is not a measure of position. Where data are obtained from a sample which is representative of the normal population for the group investigated, the mean and the median will have similar values. But in practice it is often difficult to obtain a sample that is representative of the normal population for the group. The data may be more numerous at one end of the series than would occur normally. The mean,

therefore, may not be indicative of a normal group.

By contrast, the median is a measure of position in that it unequivocally indicates that 50 per cent of the numbers in the series lie immediately above and 50 per cent lie below the particular median value. It is least distorted when a series contains extreme values. The median, unlike the mean, therefore, is more typical of a particular series because of its independence of unusual values. When the mean and median are equivalent, it is some indication that the figure is an accountable measure of the central tendency of the series.

have the best frequency rates and that the most outstanding rates occur for companies employing 2500 or more workers. This is evident in the range, which is narrow, as well as in the relative lowness of the upper figure (18.4). Progressing to the groups having smaller numbers of employees, it will be noticed that the range tends to widen and the frequency rates rise consistently until the groups of less than 50 employees are reached. Then the trend reverses. Not too much, it is true, but some significance may be attached to the interruption.

Since the possibility has been admitted that the small plant is less likely to find a regularly established job for a worker who has not been permanently injured, why then do the smallest plants in this study have a better frequency rate than the plants with 50 to 249 employees? The inference that the small plant is in a less advantageous position than the larger plant when the time comes to compute frequency rates would be weakened somewhat—it seems—by this comparison.

Although in theory the small plant may be at a great disadvantage in the development of favorable frequency rates, compared with large plants, because of the Z16.1 provision in question, there are many practical considerations which have a bearing on the comparative differences. These would tend to limit this criticism of the temporary total disability definition.

Some of the factors to be considered are indicated by

the better frequency rates for plants under 50 employees compared with those of 50 to 249 employees. It is likely that the smaller the plant, the closer is the contact between the manager and employees. It is well known that interested and close supervision is necessary in order to maintain safe operations. Since the small plant's manager is closer to the production operations, he is apt to be more observant of safety infractions, realizing more acutely the loss when accidents occur.

In the case of the medium size firms, the manager will have more subordinates at levels between himself and his employees. Although this is a situation which would prevail, also, in the larger plants, some probable differences may be present. The larger company, for example, generally has the capacity for selecting and training supervisors so that it will obtain an optimum performance from them. Also, it can afford to employ a safety engineer. It is probable, too, that the larger firms, generally, receive more intensive assistance from their workmen's compensation insurance carriers and also are encouraged to become members of safety organizations. And it is likely that because of their prominence, they receive greater attention from the state factory inspection agencies.

Obviously, therefore, there are many factors which must be working in favor of the larger company. There is probably one other consideration, however, which explains the greatly superior frequency rates of the very



large plants. Generally, they have well-rounded medical programs which provide for prompt treatment of injuries as well as the proper selection and placement of workers. It is this facility which doubtlessly increases the ability of the larger plants to control the severity of injuries and handle favorably the cases which in other circumstances might count as *temporary total disabilities*. This may appear to be an inequity to the critics of Z16.1 since the company that is not fortunately equipped with medical assistance may expect to find its frequency rates to be comparatively poor. On the other hand, there can be no question about the merit of providing prompt and skillful medical aid after an accident occurs. This certainly must be considered to be an important, desirable step in the control of injury-severity. It might be argued just as strongly, therefore, that the present American Standard creates an incentive for employers to provide swift and capable treatment of accidental injuries. The disabling injury rates, otherwise, may be adversely affected.

### ***Casts Doubt on Reliability***

The strongest and most interesting evidence which arouses suspicions of the reliability of the disabling injury frequency rate is the relationship Culbertson plots between frequency and severity rates and the average days charged per injury. He shows figures, using the National Safety Council's Accident Facts, which demonstrate that a general reduction is taking place in frequency and severity rates from 1945 to 1955, while a progressive increase in the average days charged per injury occurs for the same period. Culbertson uses this information to make the point that "one of the basic obligations of the safety engineer—to eliminate the serious hazards first" appears to be contradicted by the increasing average days charged per injury. Whether this increase can be attributed to a failure to give primary attention to controlling the more severe hazards is a debatable conclusion. The figures, however, indicate incontrovertibly that something is amiss.

Examination of the frequency and severity rate trends for the 1945 to 1955 period discloses that the frequency rate has decreased more rapidly than the severity. This is the arithmetic reason, of course, for the increase in the average days charged per injury. However, the fact that the severity rate has been dropping consistently, if not to the same degree as the frequency rate, indicates that effective work is being done in the control of severe hazards. It is not correct to make the fairly common assumption—which was not expressed or implied by Culbertson—that concentration on reduction of the frequency of accident occurrences will automatically reduce the severity rate.

### ***Need Better Measure***

The nub of the problem, it appears, is the unreliability of the frequency rate as an indicator of performance. Theorizing on the reasons for the variance that has been discussed can do no more than support the need for a more accurate measure and perhaps point out the weaknesses to be overcome by any successor measure.

It is possible, for example, that the frequency rate is dropping more rapidly than the severity because the

allowances of the controversial Section 1.2.4 of Z16.1 now are more generally applicable. It may be, for example, that there is an increasingly greater control of the cases which once would have resulted in one or several days lost time, because of a wider availability of industrial medical service. In this instance, the lower frequency rates might be explained as being more attributable to improved injury control than they would be to advanced safety techniques. Nevertheless, whatever the valid reasons responsible for the reduction of the frequency rate, the result is worthwhile if the principal reason is that, one way or another within the requirements of Section 1.2.4, more injured workers are being returned promptly to a job. This subject is a topic for criticism and discussion, therefore, only so far as it affects the frequency rate as a measure. There can be no question of the desirability of encouraging the speedy return of injured workers to a job whenever possible.

The abstracted version in the Journal of Culbertson's article, which originally appeared in the Magazine of Standards, does not make it clear that Culbertson agrees with this principle. However, his remarks in the lengthier piece indicate this agreement.

The disagreement with Z16.1 would seem to be centered basically, therefore, on whether the frequency rate, as a measure of work injury experience, is valid and reliable. Under the circumstances, there appears to be evidence that the rate can be challenged on these grounds.

To solve the problem as Culbertson describes it, he proposes: "A simple answer would be to change the definition to read, ' . . . which renders the injured person unable to perform his regular job.'"

Unfortunately, the answer is not that simple. The proposal may reduce the probable advantage of the larger plant, with its many jobs, over the smaller plant when it comes to locating an injured employee at a regularly established job. An attempt has been made to describe here, however, how this would not solve the inherent weaknesses in Z16.1, which so many safety engineers sense and which contribute to its faulty reliability and validity as a measure.

### ***Critical Reviews Helpful***

Under the circumstances, Z16.1 is the best available and must be used for national compilations of work injury experience until a better measure can be prepared. Culbertson's valuable and interesting article should be one of many probing observations on Z16.1 extended by members of the safety engineering profession in an attempt to define the problem so that a more accurate measure will be available some day. In moving in this direction, it would be worthwhile to keep the thought that Frank Gilbreth offered some time ago: "A good observer sees what he is not looking for, if it is there; and does not see what he is looking for, if it is not there." (The italics are not his, but this writer's.)

There is so much personal feeling about Z16.1 that it may not be easy to avoid the scientific pitfall that is ahead of anyone setting out to prove a belief, rather than testing it. Z16.1 is an important element of the safety engineer's present professional equipment. It deserves the best of his attention but the consideration given it should be as clinical, objective, analytical and comprehensive as possible.

*Safety rule on tying of ladders  
can be enforced more easily  
if workers are provided with this*

## LADDER safety device

*by Charles S. Wolff*

**P** RIMITIVE man used ladders. In the highly developed civilizations of Egypt and Rome, ladders were commonplace and they have remained so down through the ages. This may be at least a partial explanation for today's all too widely held assumption that people know how to climb and work from ladders safely.

Statistics show that such an assumption is incorrect. According to the 1953 edition of Accident Facts, industrial ladder accidents cause about 40,000 disabling injuries per year, nationally. This figure is based on a projection of reports from the labor departments of nine states. In these states in 1952, ladder accidents made up from 1.7 per cent to 2.5 per cent of all industrial accidents, with the average being 1.9 per cent.

A study of 140 ladder accident cases made by the National Safety Council shows that in fully one-third of the cases the ladder concerned was not securely fastened.

Securing of ladders, it would seem, is more than a minor problem for many safety departments. One industrial organization, the Dunlop Tire and Rubber Corporation of Buffalo, New York, has met this problem with a combination of comprehensive safety rules and a unique ladder safety device which, in use for some years, has been well accepted by employees.

To illustrate the possible value of this device, let's suppose that, in some unnamed plant, you are given, as foreman of an electrical gang, the assignment of pulling a wire through 100 feet of conduit which extends over a long row of machinery. The work area is high and crisscrossed by steam pipes, hot water pipes, electrical conduits and a truss which is part of the structure.

Two electricians are dispatched to the job. At the designated place in a department the men pick up a 20 foot straight ladder after unlocking it and removing the chains.

(Since this particular plant is imaginary, let's also suppose that ladders are kept in a special place and are locked up to prevent unauthorized use. In selecting the

place where ladders are to be stored many items have to be considered, including such factors as ease of handling, prevention of warping and deterioration due to heat, moisture and fumes.)

Arriving at the work area, the men place the ladder against a steam pipe. Since the ladder appears to be steady the first electrician goes up and begins feeding the fish tape into the conduit. A sudden jerky movement causes the ladder to skid on the metal deck floor. Grabbing the nearest support, the electrician is able to prevent the ladder from falling. However, in doing so he suffers minor burns from a hot steam pipe. In this case severe injury is averted and a quick inspection of the ladder shows that one of the pads on the metal safety shoes has been dislodged.

This accident could not have happened if the ladder had been tied at the top before the work began. The tying procedure, part of general ladder safety rules, is hard to enforce unless the employee is provided with an easy, fool-proof method for securing the ladder.

The Plant Engineering Department of the Dunlop Corporation some years ago developed a safety device which seems to fill this need for a quick, convenient and positive method for securing any type of ladder to the support on which the ladder rests. The device also can be used to fasten the ladder at the bottom or intermediate points depending on the location of available support. (The unit was developed for use within the Dunlop plant and is not made for commercial distribution.)

The device is used in the following way: when it becomes necessary for an employee to work at the top of a ladder he first places the ladder against the support. He then climbs the ladder, moving the slide along the ladder rail to the rigid pipe, beam or truss to be used as support. He places the cable around the support and snaps it back on itself, thus securing the ladder to the support. Greater tension on the cable tightens the grip of the slide on the ladder rail. Both ladder rails can be equipped with the device, enabling the workman to effect positive support at almost any point on either or both sides of the ladder.

The accompanying drawings (pages 14 and 15) and pictures show how the unit operates. A bolt is placed at the top end of both ladder rails so that the safety device cannot slide off.

The casting, which forms the main part of the unit, is made of malleable iron. These castings are made for Dunlop by an outside foundry. The ladder safety devices are carried as a stock item and all new ladders are provided with the locking device.

Safety engineers at Dunlop know that the ladder safety device is at best only a partial answer to the problem. Another valuable tool in their work on control of ladder accidents is a complete set of ladder safety rules. These rules, which are constantly emphasized in the plant's



*Charles S. Wolff is assistant to the managing director, American Society of Safety Engineers, a position he has held for the last five years. A graduate civil engineer (University of Illinois), he previously was employed by the Hartford Accident and Indemnity Company.*

safety program, are distributed to employees in mimeographed form and often are discussed as the principal topic at safety meetings.

The rules read as follows (*those which refer to the ladder safety device are printed in italics*):

#### **RULES AND REGULATIONS GOVERNING THE USE OF PORTABLE LADDERS**

These safety rules and regulations shall apply to all portable ladders.

##### **PURCHASE**

1. The following types of ladders will be considered as standard types for *general use* in the company:
  - a. Straight ladders—12, 16 and 20 ft.
  - b. Extension ladders—30 and 40 ft.
  - c. 6 ft. stepladder.
  - d. 12 ft. platform stepladder.

These ladders will be procured by the purchasing department as required by the various operating departments. The purchasing department shall specify on the purchase order that these ladders must meet the construction requirements of the American Standards Association, Safety Code for the Construction, Care and Use of Ladders, A-14.

2. Other portable ladders for specific purposes shall be purchased only on requisition through the Safety Department.

##### **STORAGE**

1. Ladders shall be stored so as to provide ease of access or inspection and to prevent accidents when withdrawing a ladder for use.
2. Satisfactory methods of storing straight ladders and extension ladders are:
  - a. Hanging horizontally on wall brackets.
  - b. Supported on edge in racks.

There must be at least three points of support for all ladders over 12 ft. in length to prevent warping.

3. Ladders must not be stored near radiators, stoves, steam pipes, outside or in other places subjected to excessive heat or dampness.

4. Ladders must be stenciled with the department number or name and the date they are put into service. Also, each ladder is to be provided with a serial number attached to the inside of the rail.

##### **USE**

The following regulations and safe practices are to be observed in the use of portable ladders:

##### **General**

1. Do not use an unsafe or makeshift ladder—get a safe one. A safe ladder is not wobbly, has tight rungs and side rails and is free from splinters, serious cracks and breaks. The hardware is sound and in good working condition. Rope is sound and of right size. Safety feet are of suitable design for the intended use of the ladder. In any case when an employe is doubtful as to the safety of the ladder, he is to get in touch with his foreman or his department's office for advice.
2. Wood ladders must be handled and used with care to avoid damaging them. Avoid dropping ladders. If a ladder is dropped, it must be inspected at once for any change that may have resulted from the fall.
3. In taking a ladder off a hanger or rack, or in replacing the ladder on a hanger or rack, handle it so as to prevent dropping it or abusing it. When carrying a ladder keep it clear of the ground so that the ends do not drag. Keep the front end high enough to clear a man's head, if possible. Two men are required to carry any ladder longer than 12 ft.
4. Portable ladders shall be so placed that the side rails have a secure footing and firm base. The top ends of straight and extension ladders must be placed against supports reasonably rigid and strong enough to support the load.

Figure 1—Right ladder rail is secured to beam by ladder safety device as workman at top completes repair.



Figure 2—Anchorages for straight ladder rail supplements action of safety shoes.









5. Whenever it is necessary to place a ladder in front of a door opening toward the ladder, block the door open, lock it or have someone guard it.
6. Ladders placed where there is considerable traffic of shop vehicles or pedestrians are to be guarded by an attendant or the space should be roped off or otherwise barricaded.
7. Ladders shall not be placed on boxes, barrels or other unstable bases to obtain additional height. If more height is needed, get a longer ladder.
8. Never splice short ladders together to provide longer sections.
9. Ladders may not be removed from one department for use in another department without first notifying and obtaining the consent of the department foreman.
10. Do not reach out from a ladder more than arm's length.
11. Face the ladder and use both hands when climbing up or down. If material or tools have to be raised or lowered, use a rope, or container and rope, or carry securely in pockets or belt.
12. Ladders must not be used as a guy, brace, skid or for other than their intended purpose.

#### *Straight and Extension Ladders*

1. *Straight ladders must be equipped with ladder shoes and with cable clamp before being placed in service.* Extension ladders are to be equipped according to the use required of them.
2. Straight ladders and extension ladders should not be used for any job that requires the continuous use of both hands.
3. *The ladder must be placed so as to prevent slipping and a cable is to be attached at the top before working from ladder.*

#### *Stepladders*

1. Stepladders shall be used only as stepladders and not as straight ladders.
2. Always spread a stepladder correctly so that it is steady and safe. Whenever possible, place the stepladder at a right angle to the work; that is, with either the front or back of the ladder facing the work.
3. Remember, the top is intended as a shelf and men are not allowed to stand on it.

#### *Remember:*

See that your ladder is in a safe condition—be sure the footing is secure or lash the ladder or have someone hold it—see that the top has a firm safe rest—climb carefully.

The foremen shall have the responsibility of seeing that these rules and regulations are understood and observed by the workers under their supervision.

### **INSPECTION AND TESTING**

1. New portable ladders shall be inspected upon receipt by the carpenter shop to determine compliance with the American Standards Association specifications.
2. Ladders used exclusively by one department shall be inspected and tested monthly by the foreman or

his designated assistant in accordance with the procedure described below.

3. **Instructions for Inspection**—A thorough inspection should be made in a careful manner. Determine the depth and seriousness of any breaks or cracks. If you have any doubts as to the ladder's being safe, do not use it. Instead, tag it for repair, turn it in to the carpenter shop and get another ladder. Closely observe any small cracks or other defects when you test the ladder. You may find that what seemed to be a small crack or break is really a serious defect and the ladder is not safe for use. Inspect the hardware carefully. Look for loose nails, screws, bolts and other loose metal parts. Examine the rope on extension ladders for defects. Look for loose steps or rungs, damaged or worn safety feet and splinters. If splinters are bad, turn the ladder in for repair.
4. Any ladders found to be defective through inspection or testing must be tagged immediately with the standard 5 x 8 inch red tag, "Dangerous—Do Not Use," and must be turned over to the carpenter shop for repair.

### **MAINTENANCE**

1. The carpenter shop is responsible for the repair and maintenance of ladders.
2. Ladders that cannot be repaired satisfactorily are to be destroyed.
3. Ladders shall be given a coat of shellac or varnish at least once a year and more often if necessary.
4. Rungs and steps must be cleaned of oil or grease and roughened with sandpaper if necessary to prevent slipping.
5. Ladders must never be painted because paint hides defects.
6. Repairs to ladders should be only those of a minor nature and should be made under the advice and direction of the carpenter shop foreman. If any doubt exists as to the safety of any ladder this department will destroy the ladder.

### **LADDERS FOR SPECIAL PURPOSES**

1. The Safety Department shall be consulted regarding the design of ladders for special purposes. Ladders must not be altered unless permission is obtained from the supervisor of the using department.

### **ACKNOWLEDGMENT**

*This article is based on information and a blueprint of the ladder safety device which were supplied to the Journal by Nicholas R. Hunter, safety engineer for the Dunlop Tire and Rubber Corporation, Buffalo, New York, and a member of the Niagara Frontier Chapter, American Society of Safety Engineers. The author gratefully acknowledges Mr. Hunter's assistance.*

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# AMERICAN SOCIETY OF SAFETY ENGINEERS

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## *Membership Information*

**T**HE American Society of Safety Engineers has established the following classifications of active membership.

**MEMBER** — To be eligible as a Member an applicant shall be at least thirty years of age and shall be engaged in safety engineering. In addition, he shall have either an engineering or science degree in an accredited college curriculum and the equivalent of eight full years' experience in safety engineering; or he shall have had the equivalent of ten full years' experience in safety engineering.

**ASSOCIATE MEMBER** — To be eligible as an Associate Member an applicant shall be at least twenty-five years of age and shall be engaged in safety engineering. In addition, he shall have either an engineering or science degree in an accredited college curriculum and the equivalent of three full years' experience in safety engineering; or he shall have the equivalent of five full years' experience in safety engineering; or he shall have either an engineering or science degree in an accredited college curriculum, ten years' experience in professional engineering work and one full year's experience in safety engineering; or he shall have twenty years' experience in engineering work, of which at least ten have been at the professional level, and one full year's experience in safety engineering.

**JUNIOR MEMBER** — To be eligible as a Junior Member an applicant shall be at least twenty years of age and shall be engaged in safety engineering work, which if pursued the required time will tend to qualify the applicant for the grade of Associate Member. In addition, he shall have either an engineering or science degree in an accredited college curriculum or he shall have had the equivalent of one full year's experience in safety engineering.

**AFFILIATE MEMBER** — The Society also provides a special classification, that of Affiliate Member, for those not professionally engaged in safety engineering. To be eligible as an Affiliate Member an applicant shall be at least twenty-five years of age and shall have contributed to the advancement of safety engineering through demonstrated achievement in some related field of interest in which he has been engaged for at least three years.

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# Aids for the Scouts

## Safety Good Turn

AN ATTACK AGAINST traffic accidents leads off the year-long Boy Scout Safety Good Turn Program. To assist Scouts and Scouters in this phase of the campaign, the National Safety Council is making available new and special pieces of material of mass distribution.

One of these pieces is the *Do a Good Turn* bumper strip. It is an adhesive-backed strip printed in fluorescent ink on heavy duty paper. Measuring 4 by 12½ inches, it is imprinted with the slogan, "Do a Good Turn—Be Courteous in Traffic." Prices for the bumper strip are as follows: (Sold only in multiples of 100) 100, \$13.50; 200 to 900, \$11.70 per hundred; 1,000 or more, \$11.10 per hundred.

Another piece, a miniature of the bumper strip, is the *Do a Good Turn* bike or dashboard strip. The miniature measures 1 by 3 inches, and is designed for placement on bicycles or on dashboards of automobiles. Prices are: (Sold only in multiples of 100) 100, \$2.90; 200 to 900, \$1.75 per hundred; 1,000 or more, \$1.35 per hundred.

The *Do a Good Turn* hang-on tag is the third in this series of special Boy Scout materials. Designed to be hung on house door-knobs, automobile door handles, or bottle tops, this piece shows a Scout saluting and saying "My Good Turn is to Remind You"—followed by a number of suggestions for reducing traffic accidents. Prices for the hang-on tag are: (Sold only in multiples of 1,000) 1,000, \$5.75; 2,000 to 9,000, \$3.90 per thousand; 10,000 or more, \$3.25 per thousand.

Aimed to promote the *Safety Good Turn Program* in general is the special multi-colored campaign poster. This 17- by 23-inch piece depicts a saluting Boy Scout, and bears the slogan, "Help the Scouts Help You—Be Prepared—Pre-



**MATERIALS** for the Scout Good Turn program. Upper left, 17 by 23 in. poster. Upper right, hang-on tag for door knobs, auto door handles and bottles. Below, bumper strips, 4 by 12½ in. for autos, 1 x 3 in. for bicycles.

vent Accidents." The schedule of prices for the poster is: 1 to 9, 30 cents each; 10 to 99, 22 cents each; 100 to 999, 18½ cents each; and 1,000 to 4,999, 15 cents each.

These materials, and all others produced by the National Safety Council to assist this important Boy Scout program, have been designed after careful study to tailor them specifically to the needs of the Scouting program. Furthermore, it was felt that this selection of materials offered a wide use potential which could be adapted to meet almost every opportunity to promote traffic safety.

In a recent letter General George C. Stewart, executive vice president of the National Safety

Council, stated: "I am sure you will appreciate the unlimited accident prevention potential offered by the organized efforts of 4½ million Scouts and adult leaders, all working in cooperation with their families, neighbors, local businessmen, and local officials. This opportunity presents the greatest challenge in our history to make major advances in preventing accidents."

To implement the *Safety Good Turn Program* it is suggested that safety organizations, other civic groups and businesses can perform a tremendous public service furthering the cause of safety and the Scout movement by providing quantities of these materials for distribution by the Boy Scouts.

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Circle Item No. 28—Reader Service Card

# Safety Goes to the Fair

By RUSS JAMISON

*A live skunk will be a featured attraction at the Southern Oregon Safety Fair. Proper safety precautions will be observed to protect the visiting public.*

**T**HIS announcement in the press and on radio and television was one of many innovations used to attract thousands of safety workers and the general public to a safety "fair" staged in Medford, Ore., "Winter Pear Capital of the World," Saturday, November 16.

The event marked a "first" in its field, and from the interest shown, will probably be adopted by other safety groups. Already, several areas in Oregon have announced plans to adopt "The Southern Oregon Plan." The program is being evaluated by the Accident Prevention division of the Oregon State Industrial Accident Commission, and the results studied for future use.

The Southern Oregon Safety Fair came about as the result of a meeting held to lay plans for a regional industrial safety conference. These conferences are held every two years in various regions of Oregon and are planned to bring together safety men from business and industry for discussion and evaluation of safety programs.

The planning meeting was sponsored by the Accident Prevention division of the S.I.A.C. and organized under a lay group called the Southern Oregon Regional Safety Committee.

Myron Terpening, safety supervisor for Bate Lumber Company, chairman of the group, set the wheels in motion when he asked for suggestions to expand the program of the conference so as to appeal to the general public.

The various suggestions were crystalized by the writer, by Dr. F. J. Shasky, of the Jackson County Medical Society, and



ONE SECTION of the Safety Fair held at Medford, Oregon.

others, who were appointed to a subcommittee to outline the program.

The original program committee was supplemented by staff members of the S.I.A.C. and the Medford Safety Council to handle the multitude of details for an event of this kind.

All the flavor of the old-fashioned county fair was secured by inviting every service club, fraternal organization, business and industry to enter a safety exhibit, display or demonstration.

From the time of its inception until it was held on Saturday, November 16, 1957, it kept the planners in a state of nervous anticipation as to its eventual success.

Successful it was. More than 3,500 registrations were tallied during the one-day event. This was due in large part to a unique safety idea, a well-unified plan and a desirable location, according to Chairman Terpening.

Thanks to support from southern Oregon newspapers and radio and T-V stations, everyone in the

area knew about the fair and what it offered. Coupled with this publicity was the use of hundreds of letters of invitation to a S.I.A.C. mailing list, distribution of "Safety Fair" buttons to school children and use of hundreds of placards displayed in all parts of the Rogue River Valley.

Incentive prizes of boxes of famous Medford Comice pears, contributed by the Medford Pear Shippers Association, hams and first-aid kits stimulated interest at intervals throughout the day.

Display booths were constructed by the committee and no charge was made to non-profit groups; however, a nominal charge was made to commercial exhibitors.

The response to the invitation to take part in the fair was slow in starting, but when the show opened, more than 70 booths had been set up and decorated by various organizations, firms, and agencies.

Chairman Terpening introduced Mayor John Snyder for the official greeting. Commissioners

—To page 135

RUSS JAMISON is Public Relations Counsel, Medford Safety Council, Medford, Ore.



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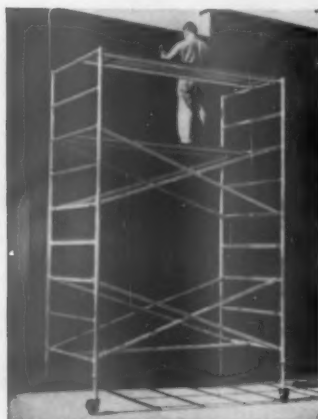
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Circle Item No. 29—Reader Service Card

# PERSONALS

News of people in safety and related activities

## Ainsworth Promoted by ASA

CYRIL AINSWORTH, technical director of the American Standards Association, New York, has been appointed deputy managing director of the association.

J. W. McNAIR, assistant technical director, and for many years in charge of the electrical and photographic work of the association, will succeed Mr. Ainsworth as technical director. Mr. McNair was also appointed assistant secretary of the organization.

Vice Admiral George F. Hussey, Jr., USN (ret) was re-elected managing director by the ASA Board of Directors.

Appointed safety engineer on the staff of the American Standards Association in 1930, Mr. Ainsworth directed the safety work of ASA in the approval and coordination of national codes for the guidance of state and municipal government, industrial organizations and insurance companies. There are a total of 165 of these American Standard safety codes in use in almost every type of industry in the U. S.

Mr. Ainsworth is a director and secretary of the Greater New York Safety Council. He has been a member since 1934 of the committee on Occupational Safety and Health of the International Labor Organization, now a division of the United Nations. He was elected president of the American Museum of Safety in 1954 and is still serving in that capacity. He is also a member of the Board of Trustees of the Museum, and is a Fellow of the Standards Engineers Society.

During World War II, Mr. McNair supervised ASA staff operations of the national standardization program for electronic components used by the Armed Forces. He administered the work of committees operating under ASA procedures, which turned out 83 War Standards in record time. Among these were speci-

cations for a 16-mm sound motion picture projector for use under field conditions, standards for films and lenses and a photographic exposure computer for military use.

CLARENCE T. WILSON has been elected president of Corporate Service, Inc., Detroit, Mich., filling the vacancy created by the recent death of Frank A. Morrison, chairman of the board and president.

This is not a new post for Mr. Wilson, as he was president of the Detroit concern until a year ago when he was transferred to Florida to direct activities of Corporate Group Service, Inc., of Florida, a subsidiary of the Michigan concern.

Mr. Wilson formerly was on the staff of the National Safety Council. He also served as secretary-manager of the Greater Detroit Safety Council and the Greater Cleveland Safety Council.

JAMES K. SKIPTON has been appointed manager of safety for W-K-M, Division of ACF Industries, Inc., Houston, Tex. He will be responsible for the safety and first aid program for both the manufacturing plant and foundry.

Mr. Skipton came to W-K-M after 12 years with a casualty insurance company where he was in charge of developing safety programs for large industrial firms in the oil and gas pipeline field. Prior to that he was staff representative for the Industrial Department of National Safety Council for Petroleum Industries. He was also director of safety for the Blue Bonnet Ordnance Plant during World War II. He is a member of the American Society of Safety Engineers and Veterans of Safety.

HOWARD J. FROHNAPPLE, long prominent in Buffalo management-labor circles, has been named personnel manager for General Drop Forge Corp., subsidiary of Dana Corp.

During the early World War II period, Mr. Frohnapple served as coordinator and expeditor of machine shop production for Curtiss Wright Aircraft Corp.

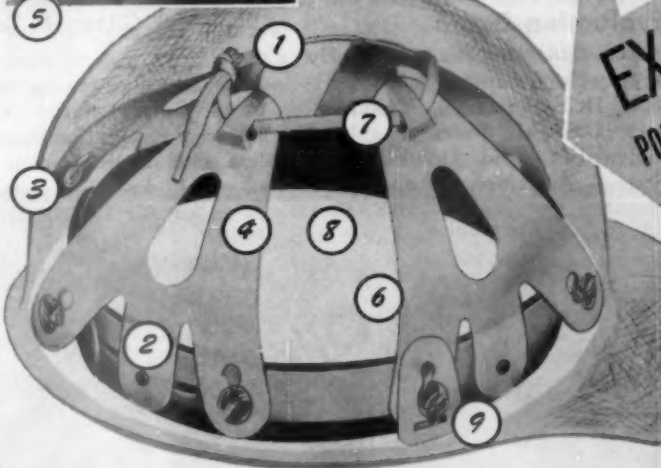


Later he volunteered in the U.S. Army Air Force and served in the ETO as a combat navigator. Returning to Curtiss he became a laboratory technician in the wood and plastics department, where he helped develop plastic tooling.

At war's end, he enrolled in the University of Buffalo's School of Business Administration. On receipt of his degree, he became safety director for Houdaille Industries' Buffalo Hydraulics divi-

# "MOST WANTED"

HERE'S WHAT MAKES <sup>ALL</sup> **FIBRE-METAL SAFETY HATS**  
& CAPS SO COMFORTABLE  
and the world's **BEST SELLERS!**



**EXCLUSIVE!**  
POLYETHYLENE SUSPENSION

...strong, pliable,  
COMFORTABLE



(1) Entire "suspension" is soft and pliable (including headband) ... automatically conforms to head.

(2) NO METAL PARTS to remove or bend.

(3) Suspension interchangeable in SuperGlas, SuperLite, SuperLectric Hats and Caps.

(4) Suspension is polyethylene ... will not mildew, sour or rot. Easily cleaned or sterilized ... unaffected by detergents.

(5) Headband, of softly pliable polyethylene, conforms to head ... adjusts to any head size from 6 3/4 to 8.

(6) All edges of suspension rounded for comfort. No hair pulling!

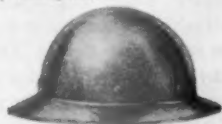
(7) Laces are recessed to prevent discomfort ... adjust for depth.

(8) Deep suspension keeps hat or cap on head firmly in any working position.

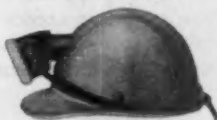
(9) Provision for chin strap in every hat and cap.

Suspension removable, but ONLY headband-sweatband need be replaced ... saves time and 30% replacement cost. No dangerous metal parts.

Ask your Welding & Safety Supply  
Distributor for bulletins ...



**SuperGlas**  
(formerly SuperGard)  
Fibreglas Safety Hats & Caps



**SuperGlas**  
Safety Cap with  
Miner's Lamp Bracket



**SuperLectric**  
ELECTRICAL  
Safety Hats & Caps



**SuperLite**  
ALUMINUM  
Safety Hats & Caps

OVER 50 YEARS OF  
WELDING & SAFETY

The **FIBRE-METAL** Products Company

Chester  
Penna.



sion, as well as of Spaulding Fibre Company, Inc. During five years with Houdaille, he also engaged in fire prevention, personnel, supervisory training, and industrial relations, finally becoming assistant personnel manager.

Mr. Frohnapple is a member of the Industrial Relations Association of Buffalo; American Society of Safety Engineers; Western New York Safety Conference, and Junior Chamber of Commerce.

JOSEPH E. DOTI has been elected vice-president and secretary of the United States P. & I. Agency, Inc., effective January. He succeeds STANLEY E. BOUGHTON who is retiring after 32 years' service. Mr. Doti, who was formerly manager of the Personal Injury Department, is a graduate of Fordham University School of Law and has been a member of the New York Bar since 1937. He is also a member of the Maritime Law Association, the Empire State Chapter of the Federal Bar

Association, and The Propeller Club of the United States. He served as an officer in the U. S. Coast Guard during World War II.

HERBERT J. WEBER, director of the safety, hygiene and air pollution control program of the American Foundrymen's society, has been appointed chairman of two important industrial committees: the Committee on Ferrous Foundries of the Air Pollution Control Association, and the ASA Committee on Mechanical Cutting and Abrading.

### Col. Teal Heads USAF Evaluation Board

COL. GILBERT E. TEAL, formerly deputy chief, Ground Safety Division, DCS/Personnel, Headquarters, U.S. Air Force, has been assigned to the 1130th USAF Special Activities Group, Headquarters Command, USAF, Fort Meyer, Va. His permanent duty station will be Lackland Air Force



Col. Gilbert E. Teal

Base, Tex., where he will serve as president of the Air Force Physical Evaluation Board, one of five such boards which evaluate physical disability retirement cases for Air Force military personnel.

Colonel Teal is a member of the

# "CRYSTALS"



## DISPOSABLE DISPENSERS THAT MAKE IT EASY TO CHECK SALT SUPPLIES

Can you glance at your present dispensers and tell how many salt tablets remain? Or does a maintenance man pry off the tops of dispensers to find out where refills are needed? Or, do dispensers sometimes sit empty because no one reports the situation?

If you have any of these problems—or want to avoid them—write for more information on StaSafe "Crystal" dispensers. When you are equipped with "Crystals", a brisk walk through the plant will tell you precisely what the salt situation is.

Then, to replenish supplies, just remove the empty dispensers—*throw them away*—and slide new dispensers in place. Yes, with "Crystals" all tablets are sealed in at our factory to insure cleanliness. There's never any handling of loose tablets and you are actually dollars ahead by discarding the empties.

"Crystals" come in 500 and 1000 tablet sizes with your choice of enteric coated or impregnated tablets at the same price.

Write today for your booklet showing all StaSafe Salt dispensers.

### STANDARD SAFETY EQUIPMENT CO.

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CLEVELAND 10, OHIO

Circle Item No. 31—Reader Service Card

Circle Item No. 32—Reader Service Card  
National Safety News, February, 1958



# Multigrip Floor Plate . . .

structural strength plus safe footing  
on coke recovery lines

Through these huge recovery mains pour millions of cubic feet of coke-oven gas and tars, on the way to becoming myriad by-products. On top of the lines (surfaced with USS Multigrip Floor Plate) are spooning holes and liquor-flushing connections to clean the lines.

**Safe Footing.** Plant workmen must walk on top of the lines, stepping over and around fittings. One slip could mean a serious accident. Here Multigrip per-

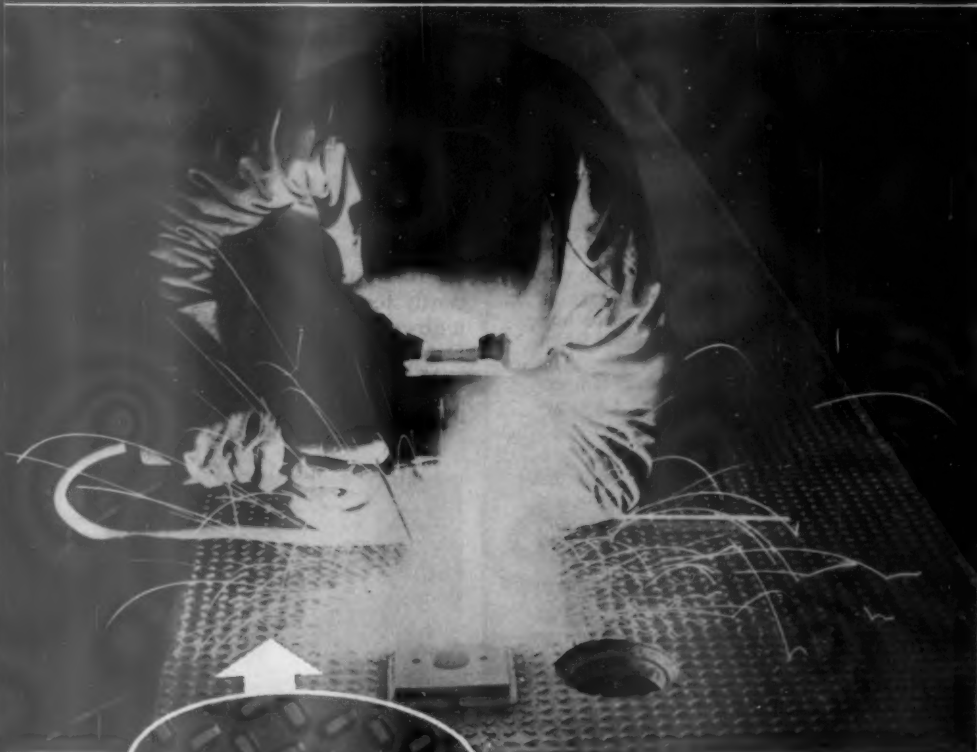
forms an important safety job every time a worker puts his foot down. Evenly spaced, flat-topped risers with clean edges afford traction from *any* direction, even when the plates are wet. Multigrip wears indefinitely without chipping, cracking or splintering. And it's available in large plates that eliminate installation waste. For safety, for long wear, for easy installation . . . specify USS Multigrip Floor Plate.

Multigrip can be cut, welded or formed where necessary.



Flat-topped, evenly spaced risers on Multigrip provide safe footing for workmen.

This 140-ton coke-oven gas collecting main, built by Jennings Mfg. Co., Masury, Ohio, is constructed of USS Structural Steel with a walkway of USS Multigrip Floor Plate.



UNITED STATES STEEL CORPORATION, PITTSBURGH  
COLUMBIA-GENEVA STEEL DIVISION, SAN FRANCISCO  
TENNESSEE COAL & IRON DIVISION, FAIRFIELD, ALA.  
UNITED STATES STEEL SUPPLY DIVISION, CHICAGO  
UNITED STATES STEEL EXPORT COMPANY, NEW YORK



## uss multigrip FLOOR PLATE

*Sold by leading distributors from coast to coast*

UNITED STATES STEEL

executive committee of the Air Transport Section of the National Safety Council, on which he has served for the past 10 years.

He served as chief, Joint Projects Branch, Military Assistance Division, Headquarters U.S. European Command from 1952 to 1955, and as deputy chief, Programming Division, Headquarters, U.S. Air Forces in Europe during 1951 and 1952.

In 1956, he returned to the United States to attend the In-

dustrial College of the Armed Forces. He was assigned as deputy commander of the Air Force Personnel and Training Research Center upon graduation from the ICAF in June 1956, and has served in that capacity until his reassignment to the new board position. Prior to his European tour, Colonel Teal was special military assistant to the secretary of the Air Force.

He served in the Southwest Pacific during World War II and

holds numerous awards and decorations.

In addition to a Bachelor of Science degree in civil engineering from the University of Maryland, Colonel Teal holds four degrees from New York University: Master of Arts in education, master of administrative engineering, doctor of engineering science, and Ph.D. in education.

RICHARD E. STEVENS of Medfield, Mass., has been appointed an assistant technical secretary of the National Fire Protection Association. He has been serving as an engineer on the NFPA staff since 1950.

Prior to coming to the association, Mr. Stevens taught mathematics at Westwood High School. During World War II he was associated with the atomic bomb project at Los Alamos, N. M. He graduated from Tufts University in 1944 with a degree of B.S. in mechanical engineering. He is a member and assistant secretary of the Society of Fire Protection Engineers.

FRED H. ELLIS has been named general manager of the Ontario Safety League, succeeding W. B. G. REYNOLDS, who resigned recently to become commissioner of highway safety for the Ontario Department of Transport.

Mr. Ellis joined the League in 1956 as director of commercial safety. He participated in the for-



Don't blame the fire department if they can't always save a building. Too often, the blaze has too great a head start to control. Everyone knows that the first five minutes are more important in fire protection than the next five hours.

Experience proves that the most effective way to cut fire losses is to employ capable watchmen who will detect blazes early. Many of the most serious fires occur at night, on weekends, and on holidays—periods when only your watchman is present.

To be sure your watchman doesn't sleep, shirk, or skip rounds, supervise him with a tape-recording DETEX GUARDSMAN Watchclock. Like a mechanical conscience, it keeps him alert and devoted to his duties when there's no one to watch him. The GUARDSMAN gives you a tamper-proof, alibi-proof record of his activities.

Why risk disaster that can put you out of business? Give yourself the benefit of those important first five minutes. Send now for complete data on how DETEX can give your plant better protection, and save on fire and burglary insurance premiums.



#### FREE INSPECTION

Is your watchman's tour giving you maximum protection? Are your clocks adequate, register keys in good order, and station-box screws properly sealed? A DETEX Inspector will be glad to make a free, no-obligation analysis to insure that your plant has maximum protection. Write or telephone today.

**Detex Watchclock Corp.** 76 Varick Street, New York 13, N. Y.

- ☐ Please send me complete information about the GUARDSMAN tape-recording watchclock.
- ☐ You may send a DETEX Inspector to make a free, no-obligation survey of our plant protection needs.

Name.....

Company.....

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Find Your Nearest  
DETEX Inspector  
in The  
Yellow Pages

N-2



Fred H. Ellis

# KODAK SOLVES ANOTHER PROJECTOR WEAR PROBLEM

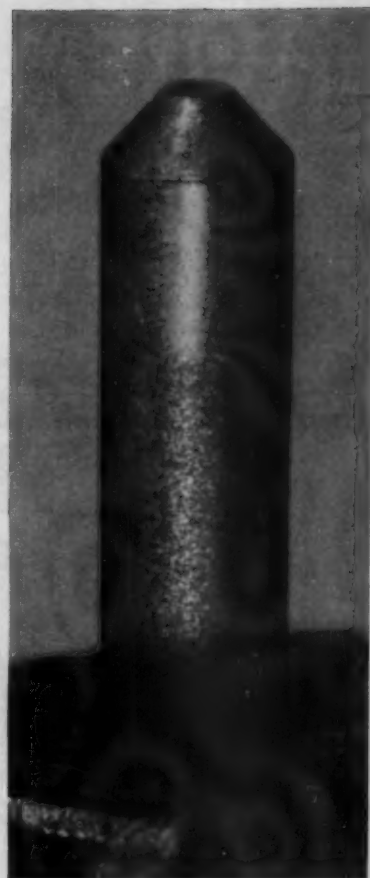
**New Kodak Pageant 16mm Sound Projector, Type II, adds new wearproof pulldown tooth to other long-life features:**

Five years ago, Kodak made the first in a series of important 16mm motion picture projector innovations . . . *permanent pre-lubrication*. Since then, you've *never* had to oil a Pageant, *never* had to worry about improper oiling, or having one run dry. Solved: the most common source of projector trouble. Ended: the threat of poor presentations because of projector failures caused by improper lubrication.

Now, Kodak introduces another Pageant long-life feature . . . a new

material for the pulldown arm that moves the film—a tooth that's virtually *wearproof*. Of tungsten carbide, this new tooth withstands indefinitely the relentless wear of daily use. (See magnified photo at right.)

Other NEW features of the Pageant, Type II, are 1200-watt lamp capacity and universally approved 3-wire power cord. Write for all the facts, illustrated in Kodak's 6-page catalog on Pageant Projectors.

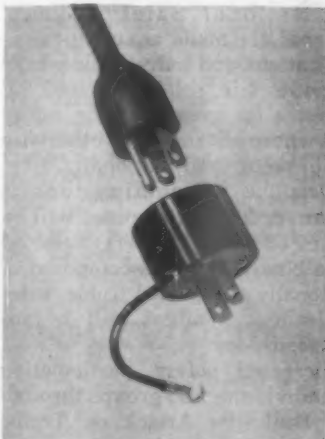


Magnified photo of the new tungsten carbide tooth of the Pageant Projector pulldown tested over 2,000 hours. Tooth shows only slight polishing—no grooving or flattening.

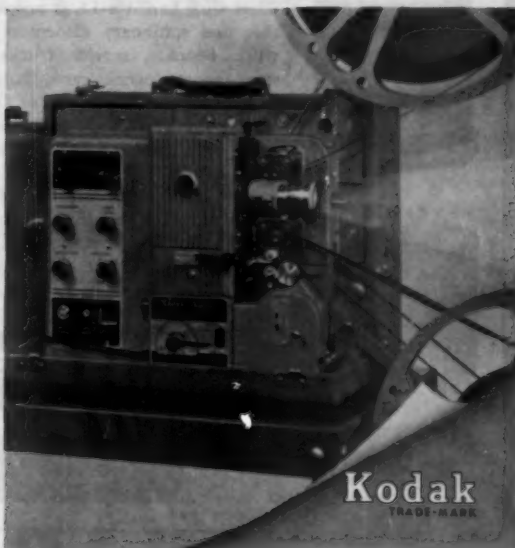
**EASTMAN KODAK COMPANY, Dept. V-8, Rochester 4, N. Y.**

For AUDITORIUM use, longer throws, hard-to-darken rooms, NEW 1200-watt lamp capacity gives 16% more screen brilliance than projectors limited to 1000-watt output.

MUNICIPAL electrical codes calling for ground wire are satisfied by new 3-wire power cord. Cord has adapter for 2-wire outlets also.



NEW Kodak Pageant Sound Projector, Type II, has 8-inch speaker in baffled enclosure . . . 15-watt amplifier . . . sets up easily with folding reel arms and belts attached.





mation and development of the League's Safety Training Institute, which teaches accident prevention courses for commercial fleet operators, fleet supervisors, the Canadian armed forces, and high school driver education teachers.

He served as safety officer, Central Command, Canadian Army, with the rank of major, from 1951 to 1956. He is past chairman and a member since 1951 of the National Truck Rodeo Com-

mittee, a director of the Motor Vehicle Safety Association, and a senior member of the Ontario Society of Safety Engineers.

O. B. SCHIER, II, has been appointed secretary of The American Society of Mechanical Engineers. He succeeds CLARENCE E. DAVIES, secretary for 23 years.

Mr. Schier has been a member of the Society since 1932 and a member of the ASME staff the

last 11 years. A graduate of Lehigh University, he holds a master's degree in mechanical engineering.

## Obituary

### JAMES A. WORSHAM

JAMES A. WORSHAM, for the past four years secretary-manager of the Long Beach, Calif., Safety Council, died suddenly on the morning of December 11 as he stepped into his car to drive to work. Death was attributed to a heart attack. His concern over Long Beach's high traffic death rate is believed to have been a contributing factor.

Mr. Worsham was widely known as a lecturer and writer. His books included *The Art of Persuading People*, *Winning Your Way* and *Low Pressure Selling*. His articles have appeared in 81 magazines.

Mr. Worsham was born in Missouri and lived in St. Louis for many years. For 10 years he was executive secretary of the St. Louis Coal Merchant's Association. He invented a smokeless soft coal furnace and a smokeless incinerator.

Surviving are the widow, three sons, a daughter and nine grandchildren.

### Nominations Open for NSC Citation Awards

AN UNPRECEDENTED number of nominations are expected for the 1957 Citation Awards for Traffic Safety Activities sponsored by the National Safety Council. Awards are made annually to organizations and individuals whose activities are solely inspired by a desire for greater traffic safety and whose efforts might otherwise go unrecognized nationally.

Deadline for nominations is February 28. Nominations will be reviewed and winners selected by a board of judges composed of nationally recognized traffic safety leaders. Winners will be announced May 5.

Increased safety participation by individuals and groups through the Back the Attack on Traffic

# INHIBIT

## DERMATITIS



**AND OTHER**

**ANNOYING SKIN**

**INFECTIONS**

**WITH VI-LAN**

**ALL-PURPOSE**

**SKIN CLEANSER**

*"Keep their hands  
clean and germ free"*

### WITH EFFICIENT DISPENSERS

**PORTABLE AND STATIONARY  
THROUGHOUT YOUR PLANT**



No. 60-70



No. 50

Recognized throughout industry as a superior, heavy duty paste-cream antiseptic skin cleanser, VI-LAN fortified with Lan Act 12, is properly dispensed with portable and stationary dispensers conveniently placed on work benches, service trucks, oil rigs, laboratories, store rooms, work carts, lavatories, and in EVERY WASH ROOM. Used WITH OR WITHOUT WATER, Vi-Lan removes greases, oils, paints, tars, acids, asphalt, pipe dope, rubber, etc., inhibits dermatitis, and serves to eliminate lost man hours and expensive compensation claims. It drastically reduces hand-cleaning costs, and removes stubborn soils in less time than conventional soaps and detergents. IT DOES WHAT SOAP CAN NOT DO, and its lanolin content preserves natural skin qualities.

**Write for  
descriptive  
folder**

**DAMERON**  
**enterprises, inc.**  
427 So. 20th Street  
Louisville 3, Kentucky

Circle Item No. 35—Reader Service Card





## Minutes Ago This Jet Was Ablaze

This Jet Fighter skidded over half a mile and burst into flame at Worcester airport. In minutes Rockwood Double-Strength FOAM was blanketing the blaze. A dangerous fire was soon under control — because the airport and Worcester Fire Departments were prepared.

As you know, the danger of highly flammable liquid is not confined to aircraft. Every day tank trucks carrying volatile fuels move in and out of your city. Rockwood Double-Strength FOAM can help protect your city from this potential danger.

Rockwood Double-Strength FOAM

applied with a Rockwood FW Eductor fights flammable liquid and other fires of the same type fast and sure. Three parts mixed with 97 parts water forms a solid FOAM blanket that quickly reseals itself. The Rockwood Eductor with the new FW metering check valve and the Type SG60 nozzle applying the FOAM make short work of fire.

Be prepared. Put this fire fighter to work. Specify Rockwood FW Eductor when you order a truck. Write Rockwood Sprinkler Company, 2049 Harlow Street, Worcester 5, Mass.



### ROCKWOOD SPRINKLER COMPANY

*Engineers Water . . . to Cut Fire Losses*

*Distributors in all principal cities*



The Variable FW Metering Check Valve on the Rockwood Eductor is highly versatile (standard equipment). Both are incorporated in a single unit. Material is metered into the hose line in any proportion from 1% through 6%.

Accidents campaign is expected to produce a bumper crop of nominations for the 1957 awards.

Nominations are open to any individual or group (except those in the media of public information field) not having a professional responsibility in traffic safety.

Individual awards are given for traffic programs on a local, state and national level initiated by an individual. Citations to organizations are made for local, state and

national activities in four classifications: civic-service groups, professional and trade associations, business and commercial firms, and government organizations—military or civil.

Nominations may be made by the nominee or any individual or organization having knowledge of the nominee's traffic safety achievements.

Copies of the official entry folder may be obtained from the Citation

Award Program, Public Education Division, National Safety Council, 425 N. Michigan Ave., Chicago 11.

## Florida U. Announces Industrial Conference

Dates for the Fifth Annual Conference on Accident Prevention Engineering have been announced as April 9-11, 1958, by W. R. D. Nickelson, conference coordinator for the Engineering and Industrial Experiment Station of the University of Florida.

The three-day meeting is one of a series held each spring on the University campus in Gainesville, under the leadership of Donald B. Wilcox, professor of industrial engineering. The sessions bring together men active in the field of safety in industry, construction, insurance, and government throughout the southeastern United States.

The theme of the 1958 program is "Exchanging Experiences." Speakers will include Prof. William N. Cox, Georgia Institute of Technology, former president of the American Society of Engineering Education; George Aro, United Engineers and Constructors, Philadelphia, Pa.; Daniel Lenahan, an authority on vibration problems, and others.

Special features include a chalk talk by Harold Rossoll, the artist who created the famous "Smokey-the-Bear" symbol of the U. S. Forest Service; demonstrations of fire hazards and alarm systems, and a group-participation demonstration of the newly developed technique of "brain-storming" ideas. Sessions will also deal with eyesight conservation, industrial disaster planning, and various technical problems.

The Florida Industrial Commission recently stated that the 1956 industrial accidents in this state incurred a direct loss of \$18,000,000. Authorization by the 1957 legislature of mandatory state safety regulations for industry and the increasing expense of compensation insurance for industrial accidents have resulted in increased interest in accident prevention efforts. An unusually heavy enrollment is anticipated.

# K-LENS-M

REG. U.S. & CAN. PAT. OFF.

## For Safe Clear Vision



**Cleans and Anti-Fogs All Types of Personal and Protective Eye Wear**

For  
Glass  
or  
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**Wise to Choose — Safe to Use**  
COPYRIGHT THE WILKINS CO. INC. CORTLAND N.Y.

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# HILLYARD FLOOR CARE saves half the Labor!



## *Hillyard* **SUPER SHINE-ALL** **LOOSENS THE DIRT FOR QUICK REMOVAL**

This easy-working cleaner actually surrounds the soil, pries it loose from the floor, breaks it into small particles that float suspended in the solution. The hardest and most time-consuming part of the job becomes the easiest.

Because the dirt is removed so completely when you pick up the cleaning water—and because Super Shine-All deposits no soap scum—rinsing is not necessary—saving half the labor.

In normal cleaning, the entire rinse operation can be omitted!

The big opportunity to save money in floor care is NOT in the pennies spent for materials. Rather, it's in the dollars that go for labor. Super Shine-All can help you save *real money*, by cutting cleaning time as much as half. Here is another proof of the axiom, *Economy in floor maintenance never comes from cheap materials.*

**NOTE:** Use Super Shine-All effectively and safely on ALL floors, including resilient, terrazzo, etc. It's **CHEMICALLY NEUTRAL**—no free acids, no free alkali, no crystal-forming ingredients, no solvents, no harsh abrasives. U/L approved slip-resistant.

The Hillyard "Maintainer" shows you how to take advantage of modern labor-saving treatment techniques and short cuts. He's your own trained floor care specialist, "On Your Staff, Not Your Payroll".



**ST. JOSEPH, MO.**  
Passaic, N. J.  
San Jose, Calif.

Branches and Warehouse Stocks in Principal Cities

### HILLYARD — St. Joseph, Mo.

I-3

- ☐ Please send me full information how to save money in floor cleaning.
- ☐ Please have the nearby Hillyard Maintainer make a FREE survey and recommend treatments for my floors.

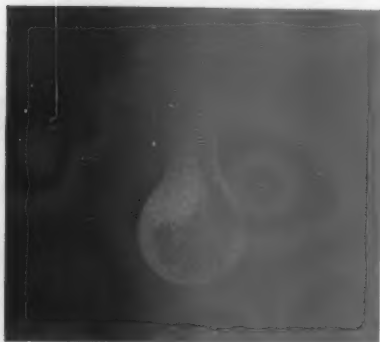
Name.....

Firm or Institution.....

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City..... State.....

**When power fails  
and lights go out**



**Exide Lightguard®  
goes on—automatically**



**CAN SAVE YOU  
\$1000's**

Here's low-cost protection against panic, injury to personnel, damage to valuable machines. Every industrial building that needs light needs Exide Lightguard. Then if regular lights go out, Exide Lightguard goes on—automatically. Free bulletin gives full details. Send coupon.

**Exide®**

INDUSTRIAL DIVISION  
The Electric Storage Battery Company, Phila. 2, Pa.

Send me the bulletin on Exide Lightguard emergency lighting units.

Name

Company

Street

City  Zone  State

18

Circle Item No. 39—Reader Service Card

## Fly Fire Truck to Arctic Town



**FLYING FIRE TRUCK** is loaded aboard a transport plane for delivery to Yellowknife in the Canadian Northwest Territory, one of the world's most inaccessible communities.

**YELLOWKNIFE**, in Canada's Northwest Territory, has its "flying fire truck."

That's what the Indians and Eskimos call their new Mack fire engine, believed to be the first ever delivered to a community by air.

Residents of Yellowknife, population 3,000, decided last summer that a fire truck was necessary for the community's protection. Getting the vehicle to its new home proved to be a major feat. Perched on the rim of the Arctic, the town is one of the most inaccessible in the world. Located on Great Slave Lake in Yellowknife Bay about 685 miles north of Edmonton, Alta., it can be reached only by boat in summer, and by air in winter when the temperature averages 65 below and the lake freezes 6 ft. deep.

Yellowknife officials decided to have the fire truck driven from Montreal, where it was purchased from Mack Trucks of Canada, Ltd., to Hay River, at the edge of Great Slave Lake. From there, it was planned to transport it by water to Yellowknife.

But after the 3,500-mile trip from Montreal to the lake, it was found that an early freeze had made the ferry journey impossible.

Unwilling to let the fire truck sit at the lake edge until the spring thaw, city officials decided to try what some considered impossible—load the 13,000-lb.

vehicle in a transport plane and fly it the remaining 200 air miles to Yellowknife. In addition to the problem of weight, there was a small matter of size to worry about. The 6½-ton vehicle, capable of pumping 750 gal. of water per minute, was more than 24 ft. long and almost 8 ft. high.

But by removing the siren, side steps, wheels, rear fenders, overhead ladder brackets, suction hose brackets and troughs and axe brackets, the big pumper was just squeezed aboard a twin-engine Bristol transport plane.

The fire truck weathered its unusual air journey without a scratch, and the whole town turned out to welcome its new "flying fire truck."

It was unloaded and the dismantled equipment was replaced in a record 12 hours. After appropriate shakedown tests, the new fire engine was proudly commissioned into service in Yellowknife's 10-man volunteer fire department.

Eskimos and Indians have been journeying from miles around to inspect and admire the new pumper which is kept in a specially heated fire house to protect it from the frigid winter weather.

Yellowknife is one of Canada's northernmost municipalities. Typical of the far northern landscape, Yellowknife has few trees. The land is relatively barren, consisting of muskeg or bog, and



*get protection plus*  
 protection+economy+worker-acceptance



Y-60  
all plastic frame

with B&L

## "new look" Safety Glasses



M-40  
all-metal frame



Titan . . .  
combination  
metal-plastic  
frame

This family of B&L "new look" safety eyewear offers you unique advantages:

1. Increased protection in S-7 lens shape: wider field of vision, fuller eye coverage.
2. New economy by virtue of reduced and simplified inventory: you can interchange temples and side shields to suit workers—and eye hazards.
3. Gratifying cooperation from workers: they like to wear the "new look," they deserve to have its comfort.

In plano or prescription lenses. For more details, phone the B&L supplier in your area, or write: Bausch & Lomb Optical Co., 90326 Smith Street, Rochester 2, New York.

**BAUSCH & LOMB**



America's only complete optical source—glass to finished product

## McDONALD PRODUCTS

*Safety Designed...*  
with comfort in mind!

# the McDonald Rialto Safety Ladder Shoe

makes any ladder

**DOUBLY  
SAFE!**



10 suction cups firmly grip smooth, wet and slippery surfaces.



Specially designed steel toe digs into snow, ice, gravel.

The McDonald Rialto Safety Ladder Shoe installs rigidly and permanently on any ladder with three connecting bolts—not merely screws. The greater level contact surface and suction cup foot make the ladder doubly difficult to tip—permit safe operation on surfaces normally inadequate for ladders.

Approved by Underwriters' Laboratories  
Send coupon for information and prices

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**B-F-McDonald Co.**

Manufacturers & Distributors of  
Industrial Safety Equipment

Please send information and prices on  
RIALTO SAFETY LADDER SHOE.

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FIRM.....

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CITY.....STATE.....

Circle Item No. 41—Reader Service Card

moss-covered rock. The town's population enjoyed a big increase during a gold rush back in 1944 and 1945, and many of the prospectors have stayed on. Main industries are mining, fishing, trapping and prospecting.

To insure operation of the pump during the 65-below weather, Mack engineers wrapped the exhaust pipes and passed both under the pump itself. They were then joined together to a 3/4-in. stainless steel pipe running through the booster tank. The capacity of this tank is 500 gal.

The engineers also installed a pan underneath the pump. This was done to keep as much heat as possible in the lower part of the pump compartment. As an additional warmth measure, two gasoline heaters were installed, one on each side of the pump compartment. These heaters were equipped with deflector plates and the entire compartment was enclosed.

Tests made later in sub-zero weather showed the special heating equipment fully effective in preventing the pumping apparatus from freezing.

## Voice of the Reader

Let's have your views on current topics. You don't have to agree with us

### Enforcement Still Needed

CHAMPAIGN, ILL. I am writing about the message from San Bernardino in the January issue. I deplore the need for the use of radar and unmarked cars to weed out speeders, and if the man who wrote had let it go at that, I would, too. But the intemperate language about enforcement is a little too much to swallow.

Anyone who considers law enforcement in the interest of highway safety as a "fear campaign," "malicious," and bordering on an "organized gestapo," ought to ask himself a few honest questions about the background for this immature attitude.

We are all in favor of getting results on the higher planes of education and engineering, but there is always an uneducated minority driving superpowered cars on unengineered roads. The time for education for many has to be on the highway. Those who get it through selective enforcement are better off than those who get it by accident.

—JOHN MORRIS

TORONTO, ONT. I am in sympathy with Mr. Joseph J. Moore's views on education vs. enforcement. We must remember, however, that education is a long term process. How do we control human behavior in the meantime? If we all obeyed traffic rules, there would be no need for radar traps and unmarked police cars.

It is precisely because we do not always do the right thing that we have our system of law and its enforcement. It is for this reason that we have our own safety rules and their enforcement.

By all means let us have education in our safety programs, but until education shows some real results, we shall have to live under law, rules, regulations and, unfortunately, enforcement.

—JOHN D. TIMLIN,  
Safety Supervisor,  
Linde Air Products Co.

### The Positive Approach

BOSTON. The letter, "Let's Have Some Positive Thinking," by Mr. John N. Carr in *Voice of the Reader* for January certainly hits the nail on the head. I want to go along with his thoughts and see if we can't take the steps forward to get us in the line of positive thinking.

It has been stressed at so many meetings that we should instruct people in the proper way of doing things and not tell them, "Don't do this." Why don't we follow the same thoughts in our entire accident prevention program? Quoting Mr. Carr, "Let's start making safety something to strive for and be proud of instead of something to be feared and avoided."

—LAWRENCE S. JOHNSON,  
Safety Administrator,  
First Coast Guard District

National Safety News, February, 1958

AT WORK OR IN EMERGENCIES:

# Why fire hose jacketed with Du Pont "DACRON" outperforms— outlasts ordinary hose

REG. U. S. PAT. OFF.



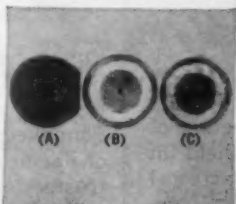
A LEADING PAPER PRODUCER finds hose jacketed with 100% Du Pont "Dacron"\* polyester fiber ideal for its operations: Chemical-resistant "Dacron" is unaffected by the caustic substances that are constantly on the ground in the area. And because "Dacron" will not rot or weaken from mildew, hose can be washed and dried on the racks . . . doesn't need frequent testing—a great saving in man hours.

**PROVED: Tests show how "DACRON" gives improved performance...**



#### SOIL-BURIAL TEST.

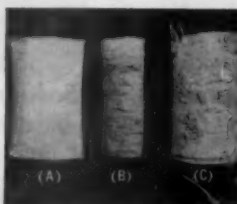
The two samples shown were buried in moist, warm soil for 28 days. When removed, the conventional hose specimen (right) showed signs of damage by bacterial and mold colonies. The specimen with jacket of 100% "Dacron" (left) did not support the growth of microorganisms and was merely soiled.



#### TABER ABRASION TEST.

In this test, hose specimens were compared for resistance to abrasion. Each test was stopped at the point where the hose had theoretically reached its maximum service life. (A "cycle" represents one complete revolution of the abrading wheel.)

(A) Rubber-covered conventional hose . . . . . 4,150 cycles  
(B) Single-jacket hose of "DACRON" . . . . . 12,500 cycles  
(C) Conventional single-jacket hose . . . . . 1,830 cycles



#### CHEMICAL-RESISTANCE TEST.

Here's what happened when three common types of industrial fire hose were immersed in a 17% solution of sulfuric acid for 24 hours.

(A) 2½" hose, single jacket of "Dacron", no apparent damage.  
(B) 1½" hose, conventional jacket, damaged.  
(C) 2½" hose, "Dacron" and conventional fiber, no damage to "Dacron".

Now hose manufacturers make an easy-handling fire hose that's ideal for both firefighting and operational use around the plant. This hose jacketed with 100% "Dacron" offers unusual versatility because of the "just-right" balance of properties found in Du Pont "Dacron".

First, it's stronger, (hose made of "Dacron" has more than 200 pounds greater test strength than most conventional single-jacket hose) and yet it's about 25% lighter. It is easier to handle, and much more flexible than previous types—gets into action fast in any emergency.

Hose jacketed with "Dacron" is economical to use for maintenance jobs because of its high abrasion resistance. It stands up under day-after-day exposure to most chemicals, too. Hose jacketed with "Dacron" has good resistance to acids, salt water, alcohols, oils, hydrocarbons and detergents. And this new type of hose can't be weakened by mildew . . . remains dependable year after year.

\*"Dacron" is Du Pont's trademark for its polyester fiber.

Du Pont makes "Dacron" fiber . . . does not manufacture hose. However, we'll gladly send you names of manufacturers of hose jacketed with 100% "Dacron".



**FREE BOOKLET:** Outlines properties of hose made with "Dacron". For your copy, write: E. I. du Pont de Nemours & Co. (Inc.), 5518-D Nemours Building, Wilmington 98, Delaware.



REG. U. S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING  
... THROUGH CHEMISTRY

**FIRE HOSE MADE WITH "DACRON"—easier to handle... abrasion-resistant...  
not weakened by rot and mildew... costs less in the long run**

Circle Item No. 42—Reader Service Card



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Circle Item No. 43—Reader Service Card

## Safety Scholarship Winners



THE NUMBER of 4-H members actively taking part in safety programs is nearing the million mark—the organization's goal for 1958. Here, the eight national winners in the National 4-H Safety Program show Ralph W. Moore, director of plant city and field relations for General Motors, the rise in the last 13 years from 72,000 participants in safety to the current figure of 825,000. GM has been sponsoring the awards since the program began in 1944.

Each of these winners was awarded a \$400 college scholarship and an all-expense trip to

the National 4-H Club Congress in Chicago, December 2-6.

Shown standing (l. to r.) are: Carolyn Kay Moor, 16, Fairview, Kans.; Mr. Moore; Sylvia McCarty, 18, Myers, Ky.; Sharon Mitchell, 16, Dixmont, Maine; Leonard Wertz, 17, McClave, Colo., and Christine Pasley, 17, Hillsboro, Ore.

Kneeling in front are Don Willis, 18, Mendenhall, Miss.; Marilyn Ellison, 17, El Reno, Okla., and Ronald Powell, 16, Clark, Mo.

They were selected for superior achievement in carrying out local safety projects.

### Berk Heads Veterans of Safety

At the 15th annual meeting of the Veterans of Safety held in Chicago during the National Safety Congress, THOMAS J. BERK, safety consultant, Metropolitan Life Insurance Company, New York, was elected president and Alfred F. Parmelee, president of U. S. Safety Service Company, Kansas City, and E. Willard Merritt, of Walter G. Legge Company, New York, first and second vice-presidents. Howard Chatfield, Fidelity and Casualty Company, Minneapolis, was re-elected secretary-treasurer.

Arthur Naquin, New Orleans

Public Service Inc., joins G. Stuart Mansfield of Western Printing and Litho Company, Poughkeepsie, and Joseph Travers of Pacific Maritime Association as trustees of the organization.

Veterans of Safety, an international organization of safety engineers having fifteen or more years in accident prevention, finds itself more and more making its influence felt throughout the nation and the world. To assist in furthering this work, Mr. Berk has appointed the following vice-presidents for "grass-roots" work among members in the newly established regions:

*Eastern Region, Charles Galla-*



way, American Optical Company; *Western Region*, Charles Hagerty, Marine Corps Base, Camp Pendleton, Calif.; *Southern Region*, Fred Claiborne, Stanolind Oil & Gas Company, Tulsa, Okla.; *Northern Region*, Robert Douglas, Detroit Edison Company, Detroit, Mich.; and *International Region*, Col. Leonard Carter, U. S. Air Force.

The growth of Veterans of Safety has been steady and its accomplishments noteworthy. With a total membership of well over 1000, and seven active chapters with a total membership of nearly 500 holding regular meetings, this organization provides many mutual benefits among safety people.

Many safety leaders have accepted assignments to aid in the administration of Veterans of Safety. Mr. Berk announced he has received the acceptance of the following to serve:

*Membership Chairman*—Glen Latshaw, Northwestern Bell Telephone Company, Minneapolis; *Archives*—D. C. Duncan, Appalachian Electric Power Company, Roanoke, Va.; *Awards*—Murray D. Smith, Davis Emergency Equipment Company, Boston; *Directory of Membership*—J. B. Hamblen, The American Oil Company, New York; *Program*—Charles Dever, Mine Safety Appliances Company, Chicago; *Research*—A. C. Blackman, California State Department of Labor, San Francisco; *Historian*—F. Rutledge Davis, Davis Emergency Equipment Company, Inc., Newark, N. J.; *Mutual Assistance*—John Sandel, Zurich Insurance Companies, Chicago; *Newsletter Editor*—Michael F. Biancardi, Allis-Chalmers Manufacturing Company, West Allis, Wis.

The *Presidential Advisory Committee* includes: Charles Dever, immediate Past President as Chairman with Charles A. Coutts, Northern State Power Company, Minneapolis, and T. R. Leadbeater, Todd Shipyards Corp., New York.

They call it "legal tender," that green and crackling stuff. It's tender when you have it, but when you don't it's tough.

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### ALL-NEW DRY CHEMICAL EXTINGUISHER KILLS FIRE FASTER, EASIER!



Kidde's new pressurized dry chemical portables awarded top U.L. rating! This means you can attack flammable liquid or electrical fires with confidence. Automatic unlocking device and trigger control mean easier, faster operation. Just follow simple directions . . . REMOVE HORN, PULL TRIGGER — instantly dry chemical knocks out fires. Other new features include extra-large aluminum handle — use with gloves on. Center-balanced — easier to carry. The plastic-faced pressure gauge is recessed for protection, tells at a glance if unit is ready to use. Available in both 20 and 30 lb. capacities.

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**Medical Supply Company**  
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Circle Item No. 45—Reader Service Card

## A Joint Safety Committee Was the Answer

By L. J. TIMMS

**F**OR NEARLY two years, a joint union-management safety program has been reducing accidents in the mines of the New River and Pocahontas Consolidated Coal Company in West Virginia.

In March 1956, when James Leeber, Jr., safety director for District 29 of the United Mine Workers of America, met with company representatives, we all agreed that, as far as safety went, much remained to be done. Although our physical plants were safer than in years past, we recognized that human failure on the part of both supervisors and workmen was becoming a greater contributor to accidents.

We believed that a joint safety committee might be the answer. In organizing the first committee, we placed the formation of the

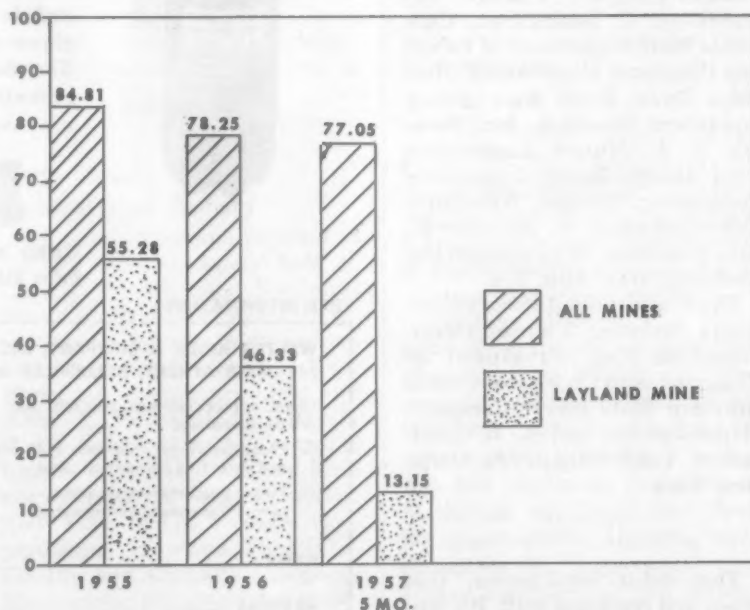
entire program in the hands of a local joint safety committee. After the second committee had been formed, it was evident that a standard form of organization was needed to obtain quick approval by top management and the officials of the International Union. A standard organization procedure has solved this problem.

To date, eight joint committees have been formed at the company's six operations. Each committee is made up of four members from management and four from the union, with two co-chairmen representing both company and union. The committees' recommendations are subject to review and approval of the safety director of the International Union of the UMW and the company.

Each mine has a disciplinary system for safety violators and discipline is reviewed by the committee. An incentive plan, financed by the employees with

—To page 110

L. J. TIMMS is General Manager, New River & Pocahontas Consolidated Coal Company, Beckley, W. Va.



**INJURIES PER 1,000,000 MAN-HOURS**  
RECORD of Layland Mine has improved faster than other company operations.

*There's extra comfort  
and extra wear in . . .*

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Riegel Gauntlet and  
Safety Cuff gloves, top  
quality side-split leather



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Leather palm,  
red Mighty-Dot® back



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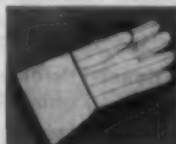
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24-oz. double quilted palm,  
heavy gauntlet, 12-oz. back



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when you buy . . .*

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24-oz., 2-ply Hot Mill  
(18-oz., Outside Ply)



Extra comfort for the hot jobs . . . extra wear . . . extra safety . . . all these you'll prove when you try Riegel's Hot Mill gloves. True-weight, 24-oz. double-quilted palms of special Riegel high-nap, heat and wear-resistant fabric. Closely spaced stitching wears longer. Choice of seams in or out; band-top or water-resistant gauntlet cuffs, with or without pulls. All have knuckle straps. Two sizes: large and extra large. Priced competitively . . . eight warehouses to speed delivery. Phone or write nearest branch today.

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## Winners of National Safety Council Awards for outstanding records

**F**OUR TYPES of awards are given by the National Safety Council to industrial members in recognition of outstanding performance in accident prevention:

1. **THE AWARD OF HONOR** is available (a) to units which complete 3,000,000 man-hours without a disabling injury, and (b) to units whose records, though not perfect, meet vigorous standards of excellence. These standards take into account the previous experience of the unit as well as the experience of the industry in which it operates. A unit must qualify on both frequency rate and severity rate.
2. **THE AWARD OF MERIT** has similar, but less exacting requirements. Minimum number of injury-free man-hours needed to qualify is 1,000,000.
3. **THE CERTIFICATE OF COMMENDATION** is available only for injury-free records covering a period of one or more full calendar years and totaling 200,000 to 1,000,000 man-hours.
4. **THE PRESIDENT'S LETTER** is available for injury-free records covering a period of one or more full calendar years and totaling less than 200,000 man-hours.

Details of eligibility requirements may be obtained by writing to the Statistics Division, National Safety Council.

### AWARD OF HONOR

**American Cyanamid Co., Lederle Laboratories Div., Pearl River (N. Y.) Plant.**

**AVCO Manufacturing Corp., Evendale (Ohio) Plant.**

**The Chemstrand Corp., Research & Development Div., Decatur, Ala.**

**Hughes Aircraft Co., Research & Development Labs, Culver City, Calif.**

**National Distillers & Chemical Corp., Louisville (Ky.) Div.**

**North American Aviation Inc., Autonetics Div., Bellflower, Calif.**

**Joseph E. Seagram & Sons, Inc., Lawrenceburg, Ind.**

**West Point Manufacturing Co., Fairfax (Ala.) Mill.**

**Western Electric Co., Inc., Merrimack Valley Works, North Andover, Mass.**

### AWARD OF MERIT

**American Can Co. Two Awards: Milwaukee Plant; Simcoe (Ont.) Plant.**

**Aluminum Co. of America, Point Comfort (Tex.) Smelting Operations.**

**American Oil Co., El Dorado (Ark.) Refinery.**

**Buckeye Cellulose Corp., Corinth (Miss.) Mill.**

**Celanese Corp. of America, Newark (N. J.) Plant.**

**Fall River Electric Light Co., Fall River, Mass. Entire company.**

**Ford Motor Co. Two Awards: Cincinnati (Ohio) Parts Depot; Fairfax-Sharonville Plant, Cincinnati, Ohio.**

**Formica Corp., Cincinnati, Ohio. Entire company.**

**General Electric Co. Two Awards: General Purpose Control Dept.,**

**Bloomington, Ill.; Industrial Heating Dept., Shelbyville, Ind.**

**Great Lakes Pipe Line Co., Northern Area, Operating Dept., Kansas City, Mo.**

**National Distillers & Chemical Corp., Sunny Brook Plant, Louisville (Ky.) Div.**

**The Pure Oil Co., Lemont (Ill.) Refinery.**

**RCA Victor Co., Ltd., Montreal (Que.) Area, Plant & Branches.**

**Union Asbestos & Rubber Co., Plant No. 5, Marshville, N. C.**

**Union Carbide Corp., Linde Co., Chicago.**

**United Fuel Gas Co., Charleston (W. Va.) Group.**

**U.S. Steel Corp., Oil Well Supply Div., Witte Engine Works, Kansas City, Mo.**

**West Point Manufacturing Co., Shawmut (Ala.) Mill.**

**Wincharger Corp., Sioux City, Iowa. Entire company.**

**CERTIFICATE OF COMMENDATION**  
**Westinghouse Electric Corp., Emeryville (Calif.) Manufacturing & Repair.**

### Consultation Corner

—From page 14

The average person not at work breathes about five cubic meters of air in eight hours. However, on a shooting range, because of the excitement, he might breathe as much as one cubic meter per hour. Assuming he spends six hours a week on the shooting range he will ingest approximately 7.8 milligrams of lead. Note that this is under the most extreme conditions. The working man in one week will ingest 7.5 milligrams under maximum allowable conditions.

From the foregoing it would appear that the problem is not critical. Few people spend six hours a week for 40 years on a firing range. To be absolutely sure there is no problem it would be worthwhile to choose two or three of the most active "shooters" who have spent the most time on the firing line and have them submit urine samples. These samples should then be analyzed for lead content in a competent industrial hygiene chemical laboratory.





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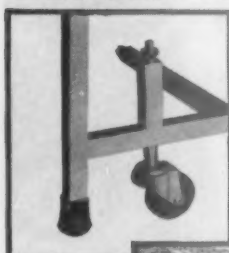
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# Work Safely

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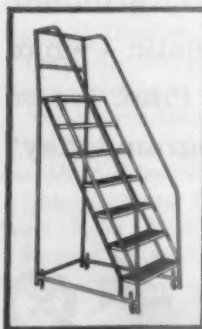
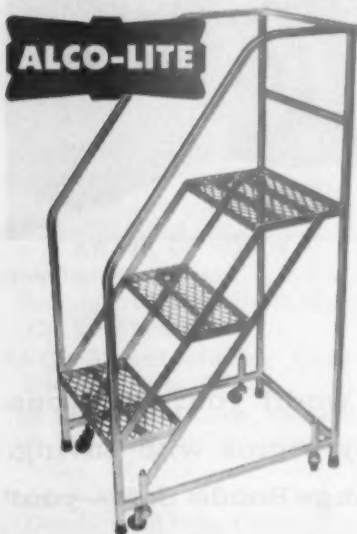
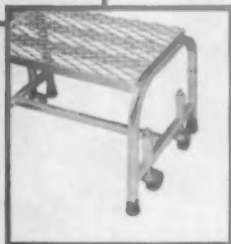


### Roll Easily!

Special casters retract automatically under users weight — 9 steps and over feature foot activated front caster brake.

### Sturdy!

SQUARE tubular steel frame. All-welded steel construction. Safe expanded metal treads.



Special taper lets you stand closer to your work. Entire unit finished with rust-resistant aluminum coating. FREE CATALOG!

ALUMINUM LADDER CO.

Dept. 5N  
Worthington, Pa.

## Joint Committee

—From page 106

matching funds from the company, has been set up at each operation.

After the first year, results were inconsistent but encouraging—in some instances no appreciable gains were made, but in others, success exceeded our expectations. The Layland Mine was the most outstanding example. About two months after the joint committee program was set up at Layland, a roof control inspection by the Bureau of Mines showed it to be the only one of our mines to have no violations of roof control standards. In most instances, said the inspector's report, roof support was better than the required minimum.

To date only nine employees at Layland have been cited by the safety committee for violations of safe working practices. Seven of them were warned and instructed in safe practices by committee members; the other two were penalized by being made ineligible to participate in the incentive program for that month.

Mr. Leeber and Wilbur Eigenbrod, the company's safety director, are working together to determine why Layland's safety program has worked so much better than those at our other operations. They have arranged a series of meetings between the Layland committee and committees from other operations.

Committeemen from both the company and the union attribute the program's success to the co-operation each side gets from the other. The results at Layland, I am sure, could not have been attained without a great deal of enthusiasm on the part of the employees and a tremendous amount of hard work on the part of the joint safety committee.

Professor: "What is steam?"  
Hep Student: "Water that's crazy with the heat."

The few seconds you save by speeding may be the first you spend in eternity.

*New*

**NON-FLAMMABLE**

**Nox-Rust**

**Rust Preventives**

*Safeguard*

**PLANTS and PERSONNEL**

Newly developed water emulsion type rust preventives completely eliminate fire hazards associated with solvent cutback compounds . . . . . yet provide comparable protection for metal parts.

Nox-Rust emulsion type rust preventives can be used in vicinity of welding and heat treating operations without danger of fire. Free of fumes . . . . . no special ventilation is required.

During 1956, 47,500 fires were attributed to flammable solvents. Avoid this danger in your rustproofing operations by using Nox-Rust emulsion type coatings.

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Write for full information about these new, safe products.

**NOX-RUST DIVISION**

Daubert Chemical Co.,  
333 N. Michigan Ave.  
Chicago 1, Ill.

*Specialists in corrosion prevention for a quarter century.*

## Safe Materials Handling

—From page 31

and lift truck itself, and put unnecessary strain on the operator.

**Keep gangways clear.** There is no point in setting aside aisle space only to clutter it with storage. Obstructions cause the delays trucks are meant to prevent.

**Eliminate blind spots.** Sharp turns, congestion, and poor lighting are to be avoided. One-way aisles are faster.

**Maintain good floors.** Rough floors and pavements are dangerous—rob trucks of maximum efficiency.

**Level out steep grades.** Limiting outdoor and ramp grades to comfortable slopes is good management. Modern industrial trucks can do a spectacular job of hill-climbing, but why wear out good machinery?

Operator fatigue can lead to accidents. Some trucks today are equipped with power steering, which one manufacturer estimates saves about 80 per cent of the operator's effort. Automatic transmissions save operator energy, too. Good seating, comfortable back rests, clear visibility, and easy-to-reach controls are all fatigue-lessening features.

With all the physical factors assumed to be under control, the course presents operating instructions "straight." A 36-page illustrated booklet is among the materials used in the course. In the eight-page section on safety, imagination and humor take over. Many of the 30 safety tips involving lift truck operation are illustrated with cartoon-type art work.

Materials handling requirements in industry are demanding faster and more efficient equipment. This in turn demands higher caliber operators. This need for more skilled people is the reason for training programs such as the Towmotor course.

For more information on the course described in this article, write to Towmotor Corporation, Cleveland 10, Ohio.

## HE MIGHT NEED THAT CANOPY GUARD



ONE WRONG MOVE, and this load of table wine would give the truck and driver the wettest christening on record. Such loads aren't recommended.

**YOUR BEST MOVE... MOVE**  
with **MERRILL**  
**MATERIAL HANDLING DEVICES**

**LIFTING CLAMP**

**TWIN LIFTER**

**DRUM LIFTER**

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**HAND GRIP**

**DRUM OPENER**

For Interesting Information write

**MERRILL BROTHERS**

54-28 Arnold Ave., Maspeth, N. Y.  
3-R-6  
Circle Item No. 50—Reader Service Card

## New Instrument for Hearing Tests

A NEW METHOD which tests both ears simultaneously, mechanically and electronically, in four minutes without pre-instruction, without a soundproof room or technical interpretation of the resultant key-punched card, has been announced by a Houston, Tex., concern.

This instrument uses the "Dynophonic" method. Basically, it places the subject as part of a mathematical bridge, and through a unique method similar to an analog computer, complex sounds are reduced to units of fundamental sounds.

With this method, sounds heard by an abnormal ear lose all identity. When heard by a person with normal binaural hearing these same sounds become identifiable and have true meaning. The test simply and basically places the left ear and right ear as a part of a mathematical bridge and the results become consistent and constant.

As an example, a person with a loss in either ear would, upon taking the test, hear something that sounded like a phonograph record played backwards. To the person with normal binaural hearing the same sounds would become intelligible words and phrases. The test it is claimed, does not depend upon the subject giving a true answer.

These conclusions were reported after field tests conducted under trying circumstances. In one instance, employees of a machine shop were tested without a soundproof room where the average extraneous noise level was measured at 85 db. In all of the tests, no pre-testing instructions were given and no soundproof rooms were used or available.

Only five per cent of the individuals tested attempted to exaggerate their hearing abilities, and upon retesting, all exaggerated cases had in excess of 20 per cent hearing losses.

Malingering claimants have been exposed in less than four minutes, and admitted falsifying their claims about hearing loss.

The "Dynophonic" method, through its computer, uses a card that is punched mechanically as the person takes the test. Upon completion of the test the card is placed in the AEC key, which gives the final results for the left ear, right ear, binaural function, perception, coordination, and other essential information.

Rapid testing of employees is one of the advantages claimed by the manufacturers, who state that up to 240 per hour can be tested by combining a battery of computers. This mass test can be conducted by one operator with the key-punched cards giving the results.

Patents for the methods have been purchased by the recently organized Acoustical Engineering Corp. from the inventor, Arnold Phillip Towne. Information about the apparatus, which is expected to go into production shortly, may be obtained from Acoustical Engineering Corp., Box 1731, Houston, Tex.



NEW DEVICE for testing hearing, the "audio calculator," with its inventor, Arnold P. Towne.

### Velfort Heads ASA Standards Council

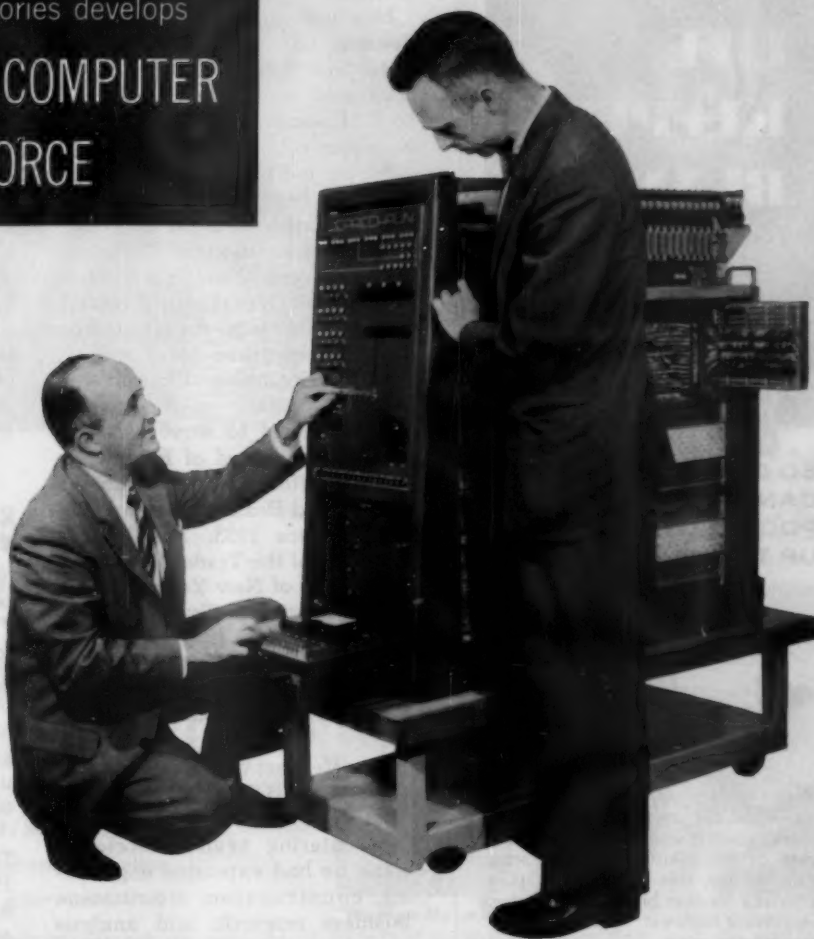
T. E. VELTFORT, managing director, Copper and Brass Research Association, has been elected chairman of the Standards Council of the American Standards Association.

Harold Massey, managing direc-



Bell Telephone Laboratories develops

## NEW COMPACT COMPUTER FOR U.S. AIR FORCE



Transistorized "Leprechaun" digital computer is high-speed, simple and reliable... a significant advance in computer design

Because of its unusual combination of research skills and communication experience, the Bell System has been called upon to carry on a number of defense activities for the United States government.

An interesting example is a recent project for the Air Force. The Bell Telephone Laboratories was asked to develop a technique for a new, simpler and smaller digital computer for weapons calculations. This was made possible by the Bell Laboratories' invention of the transistor, tiny substitute for the vacuum tube.

To evaluate a new design that was subsequently created, the Laboratories built an unusual model computer. No computer is simple, but this one (affectionately dubbed "Leprechaun" by its designers) is a lot smaller and simpler than most of the behemoths now at work. It has only some 9000 electrical components (5000 of them transistors), all easily connected or disconnected.

One of the requirements of the Air Force was for fast "remembering." "Leprechaun" can tap its 1024 "word" memory instantly, no mat-

ter where the information happens to be stored.

Because of its comparative simplicity, a computer like "Leprechaun" should be less expensive to manufacture, and can be operated and maintained by less highly specialized personnel.

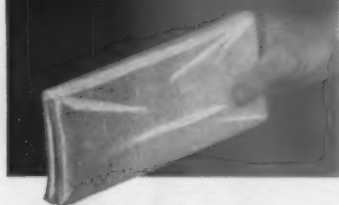
It's an example of great strides in simplifying and miniaturizing circuits... a problem of profound interest to Bell Laboratories researchers as they develop radically new equipment for your future telephone service.

**BELL TELEPHONE SYSTEM**



now...the new

## LIFE KEEPER BLANKET



**SO COMPACT THAT YOU  
CAN CARRY IT IN YOUR  
POCKET...YET IT OPENS  
UP TO A FULL 5x7 FEET!**



Remarkably strong and protective for its weight, the new Life Keeper Blanket marks another step forward in efficient care of the injured. Easy to store, easy to use, this double-thick polyethylene blanket brings you all these important features:

**WATERPROOF** to give the injured full body protection from inclement weather and wet ground. Easy to clean—just rinse or wipe off. Dries rapidly, no shrinking!

**WARM** double thicknesses of polyethylene separated by dead-air barrier hold in body heat, keep out chill air, dampness.

**STRONG** two-layer construction of the Life Keeper Blanket makes it resistant to rips, snags, and tears.

**TRANSPARENT** so that attendant can check for bleeding while the injured is in transit. Will not cling to an open wound.

**VERSATILE** Life Keeper Blanket can also be used to cover cots and other equipment as well as for protection of the injured. Provides a dry "floor" on which victim may be placed for first-aid care.

**LOW COST** Life Keeper Blanket eliminates all cleaning costs... pays for itself first few times used. Get the complete story from your MSCo distributor or write.

EXCLUSIVE WITH



*Specialists in  
first aid*

**Medical Supply Company**  
Rockford, Ill. • In Canada, W's Safety Supply Co.  
Circle Item No. 51—Reader Service Card

tor, Gas Appliance Manufacturers Association, was elected vice-chairman of the council.

Newly-elected to the Board of Review, the council's auxiliary body, are E. R. Granniss, Royal Liverpool Insurance Group, and L. E. Knowlton, Providence Gas Company.

Re-elected to the Board of Review are Perry L. Houser, Metal Cutting Institute, Leon L. Podolsky, Sprague Electric Company, J. D. Rogers, New York, New Haven and Hartford Railroad, and C. A. Willson, American Iron and Steel Institute.

C. W. Franklin, Consolidated Edison Company of New York, was re-elected to serve as alternate on the Board of Review.

Mr. Veltfort has been with the Copper and Brass Research Association since 1933. He is past president of the Trade Association Executives of New York City and of the American Trade Association Executives (now American Society of Association Executives), and past chairman of the Advisory Council on Federal Reports.

Mr. Veltfort is a graduate engineer with B.S. and C.E. degrees from New York University. Before entering trade association work he had extensive engineering, construction, organization, business research, and analysis experience with Stone and Webster Engineering Corporation.

Mr. Massey has been managing director of the Gas Appliance Manufacturers Association since October 1955. He joined the association in 1946 as assistant managing director. He was gas equipment sales manager for the American Radiator and Standard Sanitary Corporation at its home offices in Pittsburgh from 1939 to 1946.

### Chemical Society to Meet in Chicago

THE 134th National Meeting of the American Chemical Society will be held in Chicago, September 7-12. As a part of this meeting, the Industrial and Engineering Chemistry Division will present a symposium on "Safety in the Chemical Industry."

Those interested in presenting

technical safety papers are invited to contact Arthur H. Christian, Symposium Chairman, American Viscose Corporation, 1617 Pennsylvania Blvd., Philadelphia 3. Authors of papers should be members of the American Chemical Society, but if not, they may participate with a co-author who is a member. Papers by non-chemists or non-chemical engineers are entirely acceptable.

Four copies of a 200-word abstract must be submitted by June 1, 1958. Mr. Christian would also like to hear from any ACS member interested in the organization of a safety subdivision in the Industrial and Engineering Chemistry Division of ACS.

### Receives Award of Flight Safety Foundation

GEORGE H. TRYON, III, assistant technical secretary of the National Fire Protection Association, Boston, has been honored by the Flight Safety Foundation through presentation of *Aviation Week* magazine's award for "distinguished service in achieving safer utilization of aircraft." The citation reads:

"George H. Tryon, III, Assistant Technical Secretary, National Fire Protection Association, international authority on aviation and airport fire protection, his courage and persistence in the face of difficulties that appeared insurmountable in the early years of his efforts, have resulted in many fire prevention and fighting practices now widely accepted by the aviation industry. These include methods for rescue and fire fighting, fueling equipment and methods, and the dissemination of information on all phases of aviation fire problems.

"Tryon, in addition, couples his knowledge to a crusading spirit; he has assembled groups of specialists who under his guidance and example have established practices that will save much wealth and many lives."

Mr. Tryon received the plaque at the award dinner held in connection with the annual meeting of the Flight Safety Foundation at Palo Alto, Calif., November 14, 1957.



# Wausau Story

by **GEORGE W. WALKER**  
Vice President and Director of Styling  
**FORD MOTOR COMPANY**

"When people hear I'm a stylist, they usually ask me what that means. Mrs. Stubbe's pupils thought it meant drawing pictures of automobiles and they decided I had a pretty easy job.

"Believe me, there's more to styling than drawing pictures. I know because I've had a hand in styling some three thousand or more different products of all kinds. Our work is to make products look the way users *wish* they could look, fill needs users *wish* they could fill. That means 'reading minds', interpreting trends, working with engineers and merchandising men... and then designing products that are more useful and more attractive and therefore, more desirable.

"And don't forget this: People have confidence in what you offer if you're proud of it yourself. Maybe styling is responsible for that pride... or, as I found out during my visit to Wausau, it might be something not quite so tangible. The people who live in Wausau are proud of their community. They should be. It's clean, bright, friendly... a happy place to live and to work."

*Employers Mutuals appreciates Mr. Walker's visit to Wausau. Yes, we are proud of our community. Our Company was founded in Wausau—our home office is here—and it's also the inspiration for our way of working, everywhere we work.*

*Employers Mutuals, with 102 offices across the country, writes all lines of fire and casualty insurance. We are one of the largest in the field of workmen's compensation. For further information see your nearest representative (consult your telephone directory) or write us in Wausau, Wisconsin.*

"Mrs. Stubbe's 39 pupils at rural Cassody School near Wausau can bring their saved-up pennies and nickels to school on weekly Stamp Days. I was impressed how the appointed 'bankers' collected the money—\$11.76 that day—and then ordered the Savings Stamps. When the 'bank' closed, we drew pictures and talked about highway safety."

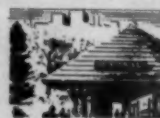


"Wausau Motor Parts Company is a 35-year-old manufacturer of piston rings, sealing rings, and valve seat inserts. I'm told this company is one of the oldest policyholders of Employers Mutuals. When George Landon, President of Wausau Motor Parts, showed me around the new plant, we watched Bob Klos check a piston ring. I appreciated seeing how these parts are made and inspected because they go into cars like the one I'd parked outside."



"Four wheels and a place to sit. That's all it takes to make my two young Wausau friends proud of their car. But in a few years they'll demand a car that has convenience, comfort, safety and the best styling on the American Road."

## Employers Mutuals of Wausau



"Good people to do business with"



# 74% USE ŌNOX<sup>®</sup>

## TO STOP ATHLETE'S FOOT



ŌNOX  
Sponge Rubber  
Footmat

## 74 of the 100 Largest Manufacturers use ŌNOX SKIN-TOUGHENER

Modern research has upset old theories about Athlete's Foot control. Skin specialists have proved that the best way to prevent Athlete's Foot is to improve the condition of the skin. *That's what ŌNOX does.* ŌNOX mineral salts toughen the skin and make it resistant to fungus growth.

**No splash • No mess • No waste • Odorless**  
**Easy to maintain • Nothing to get out of order**  
**Men like ŌNOX • Relieves tired, aching feet**

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We will ship your trial order for any amount of ŌNOX and footmats. *You pay nothing unless fully satisfied after 60 days' use.*

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HAWTHORNE, CALIF.

**SAVING FINGERS and EQUIPMENT  
IS OUR BUSINESS!**

FOR 10 YEARS WE HAVE SUPPLIED INDUSTRY  
WITH THE MOST COMPLETE LINE OF ALUMINUM  
SAFETY PLIERS AND TONGS AVAILABLE.

We design and make **SPECIALS** for your needs.

ASK FOR OUR NEW CATALOG NO. 1056

**OSBORN** Manufacturing Corp.

P.O. BOX 167      WARSAW, INDIANA

## Dangerous Sport For Amateurs

Amateur rocket programs are extremely dangerous and should be prohibited in the interest of public safety "until safe launching sites are established and until thoroughly qualified personnel, competent to supervise" such programs can be provided.

This warning has been issued to fire marshals and other public safety officials by the National Fire Protection Association.

The Association stated that rocketry "as practiced by certain teenaged boys" has become a serious problem in many areas. Two fatalities and numerous non-fatal injuries have already been reported.

In addition to the serious explosion hazards associated with rocket launching, according to the NFPA, there are also "lesser but very real dangers introduced by the handling and mixing of rocket fuels, not to mention the threat to life and property from missiles created by successful rocket launchings."

The NFPA recommends:

1. Because of the danger to the boys themselves, as well as to others, the hazardous phases of rocketry—fuel handling and rocket launching—should be conducted only at specified safe locations (e.g. outdoor rifle ranges) and under strict supervision by qualified persons.

2. There is ample evidence to indicate that many teenage rocket builders are unaware of the hazardous nature of their projects and are uninformed on technical aspects of rocketry. Assuming that this interest is actually stimulated by a desire for science education, some state-wide method of communication should be established (preferably within or through the school system) whereby amateurs can obtain answers to their rocket building problems from experts.

3. Until safe launching sites are established and until personnel competent to supervise an amateur rocket program can be provided, it appears to be in the best interests of the public to prohibit the manufacture and launching of rockets by amateurs.





# WHAT'S NEW

IN

NATIONAL SAFETY COUNCIL SERVICES \*

## Operation Safety

March signals the beginning of the spring quarterly "moral responsibility" emphasis for Operation Safety. The specific themes are "Defensive Driving" in March; "Know and Obey Traffic Laws" in April and "Vehicle Maintenance" in May.

The first two months lend themselves to the "moral responsibility" approach to driving and obedience to traffic laws especially since these are the months when the major religious faiths are observing Holy Days.

In addition to these programs, the Boy Scout Safety Good Turn for 1958 launches its traffic phase in March. The entry of the Boy Scouts into the traffic safety picture adds one of the most potent forces for safety available in this nation. With some 4,350,000 boys and leaders talking, teaching and trailblazing for safety, the year 1958 can become a "decisive year" for traffic safety.

An opportunity for unprecedented community participation and off-the-job safety emphasis exists for industry and business at this time. The joining of the religiously oriented "moral responsibility" with the Boy Scouts "Onward for God and My Country" should result in a union of great strength and create a mighty force for safety.

Your firm can reap great benefits both for your employees' welfare and for your company's prestige by joining with the Scouts,

your traffic officials and your local safety organization in a strong safety campaign this spring.

— v —

While the emphasis in March (Defensive Driving) is on driving behavior and techniques, in April the need is for driver and pedestrian observance of traffic laws and for public support of stepped-up enforcement.

A firm and continuing policy of enforcement is essential in every community where accidents are to be cut and traffic controlled.

There is also a great need for states and communities to bring their traffic laws and ordinances into closer conformity with the Uniform Vehicle Code and the Model Traffic Ordinance. Here the assistance and cooperation of business and industry in the local community can be invaluable in a community effort aimed at bringing about more uniform legislation.

Contact your local traffic officials, safety council, or any other organization working on a traffic laws program and offer your help.



"I presume that is the lad who's studying to be an artist?"

\* Look to this page each month for latest news about NSC services. Address request for additional information, samples or prices to the Membership Department.

Possible projects for you to consider are the underwriting of the cost of purchasing and distributing posters and leaflets for public education, a program slanted toward your own employees and their families on the need for legislation, the sponsorship on local radio and television stations of forums or discussions on the desirability of new legislation, and the arranging of tours or visits to police headquarters or the local traffic court.

## New Film Ordering Procedure Now in Effect

On January 1, 1958, the National Safety Council turned over its film rental libraries to Association Films, Inc., which now handles bookings, shipments, and billings direct with customers. Users now are asked to address and send orders for rental prints to Association Films, not to the Council.

The company has four distributing offices:

1. Broad at Elm, Ridgefield, N. J.
2. 561 Hillgrove Ave., La Grange, Ill.
3. 799 Stevenson, San Francisco.
4. 108 Jackson, Dallas, Tex.

To speed bookings, send requests to the nearest office.

Prints may be ordered by TWX teletype. The numbers of the branch offices are:

New York	N Y 1-4649
Dallas	DL 1095
LaGrange (Ill.)	LAG 2651
San Francisco	S F 1572

Requests to the Ridgefield office should be made to the New York number.

## CORRECTION

On page 235 of the December, 1957, NATIONAL SAFETY NEWS, we printed a statement that individual prints of The Defensive Driving Series would be available for rental through Association Films, Inc., after January 1, 1958.

The prints are for purchase only. There will be no rentals.

# For a More Successful Poster Program



JUMBO POSTER for APRIL 1958

The Jumbo poster, issued monthly, is designed for outdoor use and is available to members on annual subscription but is not stocked. Its actual size is 9' 11" by 11' 8".

## SAFETY BANNER FOR APRIL, 1958

Here is the attention-getting, monthly cloth banner. Available in two types—indoor and outdoor—both are identical in size (10 feet long by 40 inches high), have the same general message and multi-color design. Indoor type is of sturdy drill with grommets for easy hanging, while the outdoor banner is of extra heavy drill, with wind vents, and has strong stitched-in rope for durability.



1235-A

8½x11½

This new four color poster is illustrative of the 72 four color posters shown in the 1958 Poster Directory.



Electrotype of poster illustrations on this page are not available. See corresponding numbers for supplies.

Posters below are printed in two or more colors  
(Available only in sizes indicated)



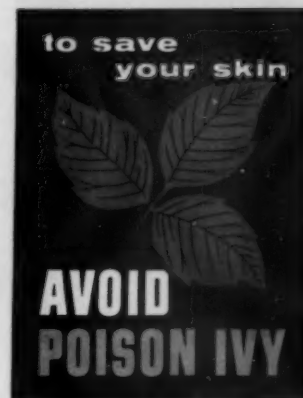
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1102-A 8½x11½



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0990-B 17x23



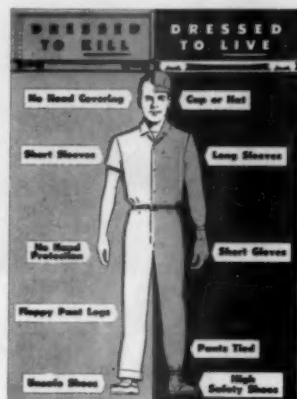
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1270-A 8½x11½



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1250-A 8½x11½



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1179-A 8½x11½



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1214-B 17x23



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1220-A 8½x11½



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1286-B 17x23

Electrotypes of payroll inserts can be furnished in all poster illustrations shown above.

Posters below are printed in two or more colors  
(Available only in sizes indicated)



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1187-A 8½x11½



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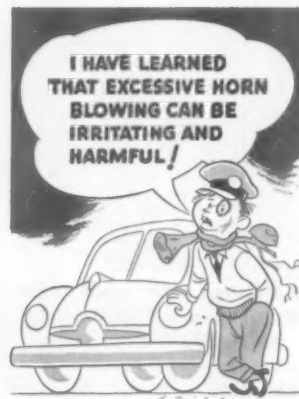
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T-1265-C 25x38  
T-1266-A 8½x11½



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T-1259-B 17x23



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V-1277-A 8½x11½



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V-1276-A 8½x11½

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G. ALLAN MacNAMARA

Portrait by Fabian Bachrach

## "IT'S AGAIN FASHIONABLE TO BE THRIFTY— and 69% of our Soo Line employees are saving regularly through the Payroll Savings Plan"

"It's again fashionable to be thrifty, and it is reassuring to note that 69% of our employees on the Soo Line are making regular purchases of U. S. Savings Bonds. Inflation is a complex thing, but here is a simple, direct step every one of us can take to help control the rising price spiral. Our recent company-wide campaign has proved that employees *want to* and *will* practice thrift by buying U. S. Savings Bonds."

**G. ALLAN MacNAMARA, President,  
Soo Line Railroad**

Individual savings are the bedrock of a sound economy.

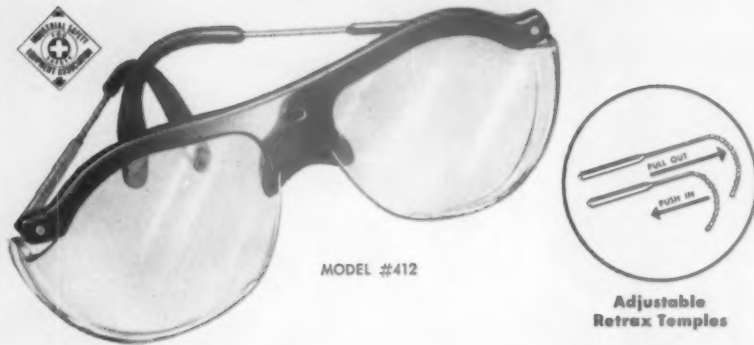
Today there are more Payroll savers than ever before in peacetime. If employee participation in *your* Payroll Savings Plan is less than 50% . . . or if *your* employees do not now have the opportunity to build for their future through the systematic purchase of U. S. Savings Bonds, your State Director will welcome an opportunity to help. His experience is yours, in setting up a Payroll Savings Plan or in building up enrollment in one already existing. Look up your State Director in the phone book. Or write: Savings Bonds Division, U. S. Treasury Dept., Washington, D. C.



## NATIONAL SAFETY COUNCIL



THE U. S. GOVERNMENT DOES NOT PAY FOR THIS ADVERTISEMENT. THE TREASURY DEPARTMENT THANKS, FOR THEIR PATRIOTISM, THE ADVERTISING COUNCIL AND THE DONOR ABOVE



MODEL #412

Adjustable  
Retrax Temples

## Featherlight TUC-AWAYS

A new thick plastic frame gives greater utility and longer life to TUC-AWAY, the safety spectacle that's so light and comfortable that workers hardly know they're wearing them.

**Interchangeable**, optically correct EYE SAVERS Lenses are safe and shatter-proof. They snap-in and snap-out for easy lens replacement.

Plastic or Metal Retrax temples telescope in and out for perfect fit — can be adjusted by the wearer.

For details, see your authorized EYE SAVERS supplier or write direct.

**WATCHMOKET OPTICAL CO., INC.**  
232 West Exchange Street  
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Quality Eye Protective Equipment

Made by the Leaders in Plastics



## Creators and Designers of SAFETY EMBLEMS, PLAQUES AND AWARDS



**WORLD FAMOUS 1933  
SERIES IN OVER 40  
TITLES ONLY ONE PRICE  
\$10.50 DOZEN PLUS F.E.T.**



Emblems Made to Order for  
Loyal Service — No Accident Awards  
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Write for FREE 36-page Catalog



### SAFE DRIVER PLAQUE

Two Tone Jewelers Bronze Etching on  
Genuine Walnut Shield. 7 1/4" x 7 1/4"

SD-3 SAFE DRIVER .....\$6.50  
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10 S. WABASH AVE., CHICAGO 3, ILL.  
SILVERSMITHSBUILDING — CENTRAL 6-5018

## Man-Made Seacoast

—From page 23

composed of eight labor stewards who make sure that this workman isn't tossing debris from a catwalk or that workman isn't walking around without his hard hat.

The stewards cover the job well, distinguished only by a small white badge with a green cross pinned to their shirts. They are empowered to reprimand workers who neglect the rules and to make recommendations for more drastic action if necessary. They meet on company time and are "docked" if they don't have a sound excuse for missing a meeting.

Once a week the committee meets with Perini representatives and Joe Huntman, the insurance firm's accident prevention engineer on the job, to discuss better ways to stop accidents.

Lou Perini, president of the Perini Corporation (and perhaps better known as the owner of the Milwaukee Braves), says that the Seaway project consists of the "most tremendous volume of work in the shortest time—\$1 billion in three years—that I've ever heard of." He points out that the safety and production record is tangible evidence of the contributions labor can make. Project Manager R. K. Ames also praises the unions and says that in the matter of safety they have gone far beyond what is normally expected or required.

These men have reason to be proud of their safety record. The Perini project's 1,200 workmen recently completed 2,774,784 man-hours with only one fatality and 14 disabling injuries, the last one on October 13th.

A major factor in achieving this record has been the indoctrination lectures for new workers. Whenever a new crew is hired—usually in groups of about 30 to 50, four or five times a month—the men receive a straightforward lecture on how much the proper observance of accident prevention can mean to them as individuals.

"Our big problem," says Safety Director Jim Regan, "was coming in here and hiring workmen who had no experience in construction work."

"We have proved, both in our

safety record and in our production schedule, that this can be done. The safety indoctrination, appealing to a man's family responsibilities, his pocketbook and other psychological factors have been important in this, as has the task of fitting the man to the job. Epileptics, for instance, are given jobs only at ground level, where a sudden attack wouldn't cause a fatal or disabling fall."

Pre-planning safety measures for the mammoth project is also a major factor in the job's record, according to Joe Huntman. During several months before work on the Grasse River Lock was started, an insurance representative met with Perini officials to discuss techniques of operation that would reduce the possibility of accidents.

One of the ideas that came out of these sessions was a decision to attach catwalks with handrails to the sides of concrete forms where men would be working at great heights.

Huntman himself made an important contribution in recommending that bars be attached below the bottom frame of the two six-story-high Gantry cranes so that men wouldn't be tempted to duck under the cranes while the machines were in motion. Huntman watched a workman do this once in a shipyard and saw the man cut in two. He never forgot it. The wooden bars serve another purpose, too: they carry safety messages such as, "Be Alert—Stay Alive." Other safety slogans on the backs of the crane cabs are readable for several hundred yards.

Another safety feature is the use of double ladders, which are simply two ladders made of one piece and set side by side. These discourage workers from climbing around each other on a single ladder. They are not meant to be used by two men at the same time except for the climbing around process, according to General Superintendent H. L. Cooper, and any workmen seen breaking this rule are reprimanded.

The New York Power Authority's safety program was, of course, organized on larger lines

Circle Item No. 57—Reader Service Card

## CAPRICIOUS COMPRESSORS

that "Rock and Roll" off base



... can be safely and securely held in place by CASTEEL Wheel Blocks

Rugged one-piece steel castings . . . light weight but strong and compact with calks cast-on at rear of base. Inexpensive . . . indestructible.

WB17 JET Wheel Block can be used for many types of wheel mounted equipment: pumps, drills; stake and panel trucks; small aircraft; passenger vehicles, etc.

The safest buy you can make to guard against accidents.



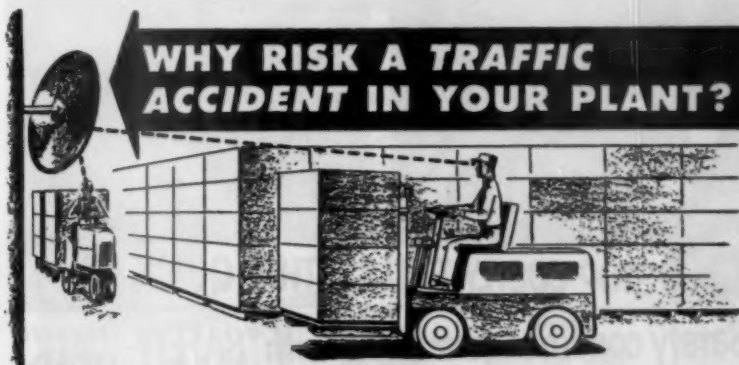
Write for  
BULLETIN  
No. N-58

**CALUMET STEEL CASTINGS CORP.**

1636 SUMMER STREET HAMMOND INDIANA

WHEEL  
BLOCK  
WB-17

## WHY RISK A TRAFFIC ACCIDENT IN YOUR PLANT?



**KLEAR-VU SAFETY MIRRORS** are the answer to the dangerous blind corner problem in your plant or warehouse. They are also adaptable for outdoor use in your parking lot, loading dock area or other points where traffic converges.

Mounted at cross aisle intersections, entrances and exits at a height of 8 to 10 feet, Klear-Vu Safety Mirrors clearly reflect oncoming intersection traffic to both power truck operators and pedestrians.

Style	No.	Dimensions
Circular Convex Glass	120	12" dia.
Circular Convex Glass	180	18" dia.
Circular Convex Glass	240	24" dia.
Circular Convex Glass	300M.R.	30" dia.
Circular Convex Glass	360M.R.	36" dia.
Flat Glass Rectangular	918	9"x18"
Flat Glass Rectangular	1640	16"x24"

M.R. Indicates metal rim.

Available in either convex or flat glass styles, the mirrors are easily installed and quickly adjustable to any desired angle.

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Write for  
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Circle Item No. 58—Reader Service Card



the new basic material, all in one piece (including channels), not welded, riveted or expanded in steel or aluminum, in standard sizes and gauges. Safety GRIP-STRUT presents an open space, in a diamond pattern, in excess of 55% of the area for ready access of light and air and gives a positive non-skid footing in all directions. Ideal for work platforms, stair and ladder steps, flooring, balconies, catwalks, machinery guards, fire escapes and for original equipment safety treads.

#### Important Safety Features

- ★ Fire proof
- ★ Slip proof
- ★ Maximum strength

- ★ Minimum weight
- ★ Easy to stand on
- ★ Cool in summer — warm in winter

#### Big Economy Features

- ★ For balconies — no extra light needed below — no extra heat.
- ★ No extra supports necessary — channels are integral part of the material

- ★ No secondary sprinkler heads needed
- ★ Self-cleaning
- ★ Cut and installed like lumber by your own maintenance force
- ★ Low in original cost



Distributors in all principal cities. Consult yellow pages in phone book under "GRATING."

**GRIP-STRUT division**  
THE GLOBE COMPANY • Manufacturers since 1914  
4018 S. PRINCETON AVE. • CHICAGO 9, ILL.

SEND FOR NEW CATALOG



**STOP COSTLY FALLS...THIS QUICK !**

## Safety condition your plant with "SAFETY-WALK"

Here's the new mineral-coated fabric that provides perfect traction—sure footing—even under water or grease! And it's easy to apply, easy to keep clean. Use "SAFETY-WALK" Non-

slip Surfacing also on stairways, ramps, walkways—wherever the danger of a fall is present. It pays off in accident prevention, better employee relations... stops costly production delay.

**FREE SAMPLE!** Please send me "SAFETY-WALK" sample and complete information

Minnesota Mining & Mfg. Co.  
Dept. LB-28, St. Paul 6, Minn.

Name .....

Company .....

Address .....

City ..... Zone ..... State .....

REG. U.S. PAT. OFF.  
**SAFETY-WALK**  
BRAND

#### NON-SLIP SURFACING

Made in U.S.A. by  
Minnesota Mining & Mfg. Co.  
St. Paul 6, Minn.

Made in U.S.A. by Minnesota Mining and Mfg. Co., St. Paul 6, Minn. Export Sales Office: 99 Park Avenue, New York 16, N.Y. In Canada: P.O. Box 757, London, Ontario.



and involves a great many more people. A project safety engineer, who reported directly to top management, was appointed to head the program and was supplied with assistants as required. He was a staff advisor to top management with the prime function of providing advice and guidance for the program and directly assisting the various resident engineers. He also was responsible for compiling the over-all job safety records, statistics, and reports, and continually pointed up weak points in the program.

Enforcement of the safety requirements of the specifications was through the regular line organization, with each resident engineer being held accountable for the various safety features of his project through his field engineers and inspectors. Safety requirements were considered to have the same weight as requirements for quality of construction.

Each contractor had a safety engineer on its project to fulfill the safety requirements of the specifications, working through job superintendents, foremen, and workmen. Contractors' safety programs were carried out as line functions.

Monthly meetings with top management of the engineer and each contractor were held to formulate policies, discuss weaknesses, review accident records, and devise improvements. Each contractor's project manager, the general superintendent, the safety engineer, and shift superintendents were required to attend.

Similar meetings were held at each job level with the resident engineers and their staffs and the job supervisors and foremen. Each project carried out a program of safety education through meetings of foremen, leadmen, and workmen. Probably the most effective means of furthering the safety program were the short tool-box meetings between foremen and their crews daily or as required to cover the hazards peculiar to each crew.

On each job a new workman was given a list of safety rules and an interview with a member



of the contractor's safety organization in which the particular hazards of the project were discussed. The new man later had a similar discussion with his immediate foreman. Employees were screened to prevent assignments of unfit men to especially hazardous work.

Large National Safety Council posters were erected at each project and smaller posters were displayed at check stands where the accident record of the job was illustrated. Timely safety reminders were issued with pay checks. Both the indoctrination lectures and the literature appealed to the worker's responsibility to his family, his fellow workers, and his pocketbook.

Area-wide competition was promoted for the best safety record of different crafts and for the different projects. The job with the best monthly record was awarded a large safety flag to fly the following month. Flags were awarded with ceremony and publicity.

Contractors maintained safety records of their foremen and presented them with awards when they reached admirable accident-free exposure totals.

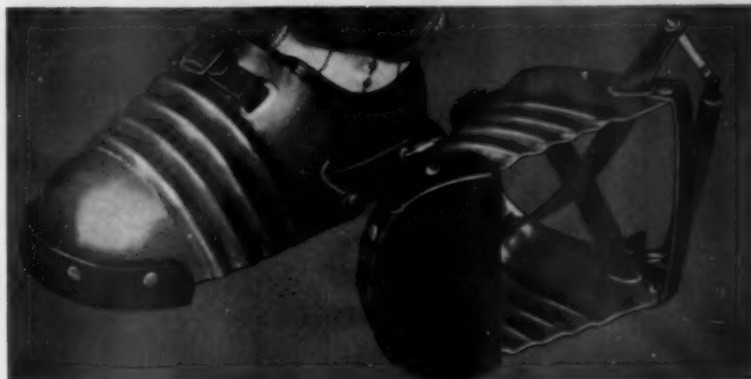
The cooperation of the unions was obtained in promoting safety education in their meetings and in having them assist with safety indoctrination of new employees. Union stewards worked with the engineers and the contractors in policing safety regulations and devising safer methods and procedures.

An organization including all safety engineers of the different entities and their contractors on both sides of the river was formed. At monthly meetings they reviewed and discussed safety problems and records. In all operations, the insurance carriers' safety men contributed advice and guidance, as did the accident prevention specialists of the New York Department of Labor.

This coordinated, all-out effort resulted in an accident frequency rate of about half the national average for heavy construction in the approximately 60 million man-hours of exposure so far.

Circle Item No. 61—Reader Service Card

## FOOT-TOE-LEG Protection by "Sankey"



### "SANKEY" IMPROVED FOOT GUARD

The metal shield (above) is designed to furnish a maximum amount of protection to the entire front of the foot—not merely the toes alone, but also to the instep against hazards from falling, rolling or flying objects, or from accidental tool blows.

- Absolute freedom of leg motion, utmost protection and comfort come with the leg-contour shaped "Sankey" fibre shin guard (right).
- Fibre knee-shin guard (right) provides flexible knee movement on jobs with both knee and shin hazards.

For more information write today

**ELLWOOD SAFETY APPLIANCE CO.**

225 SIXTH ST. — NSC ELLWOOD CITY, PA.





**MATCHED** to your needs

**SURETY** INDUSTRIAL GLOVES

**PROVED** more wear per pair

Just the right gloves, for the jobs to which you subject hands, are as important as the right production machinery. By supplying gloves with proper hand comfort and assured safety you improve valuable workers' satisfaction.

**Natural Rubber, Neoprene, Sureseal (HYCAR), Vinyl and all types of Coated . . .**

Surety makes many regular and special types of gloves for most requirements and can supply accurate information as to wearing qualities and resistance that will help you select the right gloves for your jobs and control glove costs. Send for a Surety catalog.

THE **SURETY** RUBBER CO. CARROLLTON, OHIO

In Canada: Safety Supply Co., Toronto

# YOU CAN'T "KEEP ON YOUR TOES" IF YOU DON'T KEEP YOUR TOES ON!



**COMPOSITION CORK SOLE NO. 200** ▶  
**CHROME (GREEN) LEATHER SOLE NO. 702** ▶  
**PLAIN SOFT TOE**  
**STEEL ARCH SUPPORT**  
**GOODYEAR WELT CONSTRUCTION**

Comfort is fundamental in foot safety! Safety is a matter of conscience with us. Every employee of ours is on an hourly rate basis! Every employee's job depends on quality not quantity!

- ◀ **NO. 802 COMPOSITION CORK SOLE**
- ◀ **NO. 902 CHROME (GREEN) LEATHER SOLE**
- STEEL SAFETY BOX TOE**
- STEEL ARCH SUPPORT**
- GOODYEAR WELT CONSTRUCTION**



**HARRY J. WOLF  
SHOE CO.**

**SHEBOYGAN, WISCONSIN**

BUILDING SAFETY SHOES NEARLY FORTY YEARS

## This **DL** DISPENSER HELPS PREVENT the SPREAD of DERMATITIS

### ELIMINATES CONTAMINATION

of DL HANDI-CLEANER supply thereby preventing the spread of Dermatitis.

### HEXACHLOROPHENE and LANOLIN

in DL HANDI-CLEANER guards against infection keeping hands soft and healthy.

### SAVES COSTLY MAN HOURS

by reducing "clean-up" time. By actual test this dispenser delivers 4 cleanings for a penny.



**DL DISPENSER**  
Pat. No. 2,789,737

**DL**  
**SAFELY REMOVES**  
 GREASE • GRIME • CARBON  
 LIPSTICK • PAINT • SHELLAC  
 ASPHALT • RUBBER CEMENT  
 GUM • TAR • PRINTERS INK  
 ADHESIVES, ETC.

## ACCEPT NO SUBSTITUTE

**DL** *First and Finest for Over Twenty Years!*  
**HANDI-CLEANER** ... USE WITH OR WITHOUT WATER  
 Made only by **BANITE CO.** Banite Bldg., Buffalo 4, N.Y.

Circle Item No. 64—Reader Service Card

## Under One Roof

—From page 25

flexibility. This has greatly simplified the development of a compact, orderly, straight line layout.

To ensure maximum utilization of the vast floor area and maximum convenience for the employees, the principal locker rooms and convenience facilities have been located on mezzanines directly above storage areas where the limited requirements for head room make for an ideal situation.

**Ventilation.** Heating and ventilating for the entire plant are provided by standard package-type convertible supply units on platforms up in the roof trusses. The necessary fans, heating coils, and air-handling chambers were assembled on each platform at floor level and then raised into position as a unit. These units, each of which has an air-handling capacity of more than 20,000 cfm., together with special process ventilation and exhaust systems, combine to move air at a rate of 3,320,000 cfm. in the factory building. Bank after bank of special purpose benches for wiring dial telephone equipment are equipped with separate ventilating ducts leading from the soldering pots to the roof.

**Noise control.** The noise level has been held down by the use of Fiberglas insulation in the roof, which is a poured gypsum deck topped by a 20-year tar and gravel roof.

Fluorescent lighting fixtures installed throughout the plant maintain even, glare-free illumination of specific intensities, which range from 65 to 100 foot-candles in most of the final assembly areas, to 40 foot-candles in the metal working departments and stockroom. Benches are surfaced with a special green plastic material that reduces optical fatigue.

Power for the lighting system and for the two and a half mile network of bus bars serving production equipment is distributed through nine electric load centers. The plant has a total connected power load of 19,000 K.V.A.

**Fire protection.** Automatic Electric is ready for emergencies. Two

1,000-gallon-per-minute deep well pumps provide water to meet the plant's basic operating requirements and fire protection. The plant has a 250,000-gallon water spheroid which serves as the direct water supply source. The spheroid is divided so that half the water is for common usage and the other half is reserved for sprinkler use. In addition, the plant has a 400,000-gallon steel water reservoir.

**Medical department.** In the medical department, clear glazed tile extends from the terrazzo floors to the metal acoustic ceilings. It includes a large office with convenient waiting area, two well-equipped treating rooms and a battery of individual bedrooms for use by employees when indisposed.

There are two air conditioned cafeterias, one with a capacity for seating 1,400 and the other, 700. All food is prepared in a single well-equipped kitchen, surrounded on three sides by cafeteria service counters and on the fourth by an areaway with special facilities for receiving foodstuffs and disposing of waste.

Two large refrigerating compressors with a combined capacity of 1,200 tons have been installed below ground. They provide all the cooling required for 95 separate air conditioning zones, each of which has its own thermostatic controls.

Steam for heating and process requirements is generated by three stoker-fed coal boilers, two with a capacity of 50,000 pounds of steam per hour and one of 22,000 pound capacity. They are located in a separate structure where air compressors, fire pumps and remaining plant service equipment have been concentrated.

In the old days when Automatic was located just outside of Chicago's congested Loop, the employees had to scramble for parking space on the city streets. The new plant has two large paved employee parking areas with accommodations for 4,600 cars. In addition, there are special parking areas for visitors and vendors.

Circle Item No. 45—Reader Service Card

the finest, most accessible,  
easiest-to-work-in  
**FIRE RESCUE SUIT**  
on the market today!

**FIRE KING**  
by **WHEELER**

ANOTHER *Wheeler* EXCLUSIVE!

Here is the result of over 40 years' experience in rescue suit development. The Fire King is proven in actual use and has been accepted by industrial and civic fire fighting units. The exclusive Wheeler design means superior protection for you. Fire King can be put on faster, permits more body freedom, and resists fire better. It's undoubtedly the best fire suit you can buy.

*Fight Fire with Fire King.*

CONTACT YOUR WHEELER DEALER OR WRITE DIRECT

\*Design Patented—Trade Mark Registered

**WHEELER PROTECTIVE APPAREL, INC.**  
226 W. Huron Street • Chicago 10, Illinois



Fast, portable case. Wall hung if desired. Fire King shown with air respirator.

## SAFETY BULLETINS



**COSTLY CAR  
DERAILMENTS**  
with a low cost

### M & M RAIL CLAMP

The M & M Rail Clamp positively will not slip, so car wheels can't move and cause costly accidents and injuries to employees.

Even heaviest cars are held in position with this small, compact clamp. Its dependability is proven constantly throughout industry—even the heaviest industries—coal, steel, construction, etc.

Write for complete descriptive details.

This advertisement is shown here posted on a Diamond Bulletin Board, another product of Safety First Supply Company.

**SAFETY FIRST SUPPLY COMPANY**

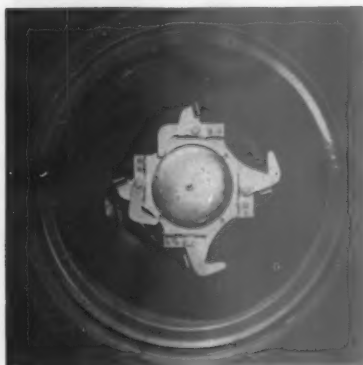
425 MAGEE STREET • PITTSBURGH 19, PA.

Circle Item No. 66—Reader Service Card





**It warns men  
he can't!**



## **BULLARD MECHANICAL Back-Up Alarm**

Almost every day on some crowded job site, with trucks maneuvering forwards and backwards, a driver grinds into reverse... rear vision is blocked... then... tragedy!

This simple, failproof, mechanical back-up alarm never forgets to warn men behind. A loud klaxon-like bell rings the minute wheels turn in reverse. It is a complete self-contained unit that can be easily installed on almost all vehicles with conventional wheels.

Write for technical literature, installation instructions and test reports



**E. D. BULLARD COMPANY, Sausalito, California**  
Circle Item No. 67—Reader Service Card

## **Good Samaritans**

—From page 21

take refresher courses and pass periodic examinations. Special awards are given for each confirmed courtesy stop made by a driver and annual awards are made for accident-free records.

The company also sponsors an ambulance division of the order of St. John, an international agency designed to supply emergency assistance. Membership in this division is voluntary and each year some 3,000 hours of public service is put in by Labatt personnel through the St. John program.

Other company projects include a mobile safe driving clinic for instructing and testing drivers; the University of Toronto's Division of Public Safety which was completely underwritten by the company during the first three years of its existence; a safety film service, and active cooperation with the safety programs of various associations.

The benefit of this program in improved public relations and high operating standards is revealed by the hundreds of grateful letters received by the company and by the outstanding safety record its drivers have established.

## **The Road Back**

—From page 27

him in holding and carrying activities, he would have to utilize his minor hand and arm to a greater degree than before. The principle behind having him throw a ball and play horseshoes was the first step in gaining coordination of this part into a new muscle pattern, and gradually finer skills could be introduced for this previously little used hand.

This patient was the secretary of a local press plant union, and in a week he became one of our staunchest advocates. One's greatest support comes from the opposition who have been con-



**Can Your  
TOILETS  
stand the  
MIRROR  
TEST?**

The odor and germs are in the crust under the rim. Hold a mirror in the bowl and see where odors come from. Sani-Tate Liquid Bowl Cleaner stops them by removing those hidden incrustations which harbor germs. It's a powerful, noncorrosive disinfectant which makes bowls completely sanitary with one application. Pleasant-smelling Sani-Tate cleans off stains and dirt with little effort, keeps porcelain brightly polished without danger of harming the surface... and does all three jobs at once. Saves labor, saves time and materials. Get our free Sani-Tate Mirror Card and give your toilets the mirror test which will show you why you need Sani-Tate.

**SANI-TATE  
CLEANS, DISIN-  
FECTS • DEODORIZES  
IN ONE  
OPERATION**

**NEW**



**FREE  
SANI-TATE  
MIRROR  
CARD**



**Huntington Laboratories**  
Huntington, Indiana  
Philadelphia, Pa. • Toronto, Ont.

Circle Item No. 68—Reader Service Card  
National Safety News, February, 1958



## It's a fact!

Slips and falls cause  
20,000 DEATHS, over  
2,000,000 INJURIES  
each year.\*

Get all the facts on  
modern floor care  
in this free booklet!



If you have extensive floor areas  
to maintain, you need this booklet.

It shows you how to improve  
safety through proper floor care.  
It contains a complete and im-  
partial discussion of the kinds  
of maintenance material best  
suited for use on various types  
of floors . . . from the point of  
safety and appearance.

\*National Safety Council

Send for your FREE  
32 page floor care booklet  
today



Branch Offices  
in Principal Cities  
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Toronto, Ontario

### MASURY-YOUNG CO.

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☐ Send me free, your new floor care book-  
let, "What Every Executive Should Know  
About This Vital Thousandth of an Inch".

☐ Please have your representative in my  
area call me for an appointment to discuss  
the MYCO Method of floor care.

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Company \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_

NS-28

Circle Item No. 69—Reader Service Card

National Safety News, February, 1958

verted, because he has been con-  
verted by reason. By the same  
token, men with shoulder injuries  
work on looms, working at the  
level of the shoulder, which  
requires increasing range and  
muscle power to hold the arm in  
its new position, and all the time  
the arm is exercised in its proper  
manner.

### Group Morale

In this stage, to gain muscle  
power we utilize resistance exer-  
cises through the guidance of male  
therapists. These therapists are  
called "remedial gymnasts." In  
this field the male represents a  
better leader than the female.  
Under the remedial gymnasts we  
also have group exercise activities  
graded into classes. These classes  
are organized on an anatomical  
basis, for example, the back class,  
shoulder class, foot class, hip and  
knee class and special hand class.  
In these classes group morale  
development stimulates the  
patient.

Here the patient sees those  
about him who are much worse  
off physically. It is generally true  
that the more severely handi-  
capped put forth a greater effort,  
and, in truth, shame those less  
severely handicapped into a  
greater degree of cooperation and  
performance. Often a patient says  
he feels he can go back to work if  
so-and-so, who is much worse off  
than he, can perform the way he  
does.

### Friendly Competition

In this group of classes we also  
have an obstacle course, which is  
a means of increasing physical  
exertion, as well as friendly com-  
petition among our more advanced  
patient groups. As the patient  
progresses, we try to increase his  
activities so that he is putting for-  
ward an effort as near to the maxi-  
mum as possible. To do this we  
utilize a variety of media.

We have 12 acres of grass to  
cut, and purposely do not have  
power motors. We have patients  
with various types of injuries

90% of overhead  
servicing can be  
done faster and  
safer with these  
**ECONOMY Hi-Reach  
Telescopes!**



Model LB

#### Hi-Reach Telescopes

Four heights 20 ft. to 35 ft.  
Standard Models from \$1510.00 up.

Model PUL

#### Three Standard Models

No. 1 — Lift 10' 9"	\$370.00
No. 2 — Lift 11' 9"	\$390.00
No. 3 — Lift 15' 0"	\$400.00

Rubber tired wheels \$10.00 extra  
F.O.B. Chicago

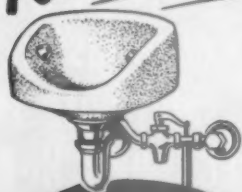
Custom built Hi-Reach Tele-  
scopes up to 100 ft. Write for  
complete catalogue. Economy  
Engineering Co., 4518 W. Lake  
St., Chicago 24, Ill., 342 Madison  
Ave., New York 17, N.Y.

**ECONOMY  
ENGINEERING**

Circle Item No. 70—Reader Service Card

# FOR CHEMICAL BURNS

## ... CLOTHES ON FIRE



**EYE WASHING FOUNTAIN**

### • EYE WASHING FOUNTAIN

Provides a first-aid procedure recommended by medical authorities in the event of any chemical in the eyes.

**EMERGENCY SHOWER**



### • EMERGENCY SHOWER

Permits an individual to thoroughly drench himself with gallons of water simply by leaning against operating chain which attaches to floor.

WRITE FOR BULLETIN NO. 86  
for Information on Both Items



*Safety Equipment for all Industries*

**INDUSTRIAL PRODUCTS COMPANY**

2850 N. FOURTH STREET • PHILADELPHIA 33, PA.

 No. 13	 No. 40	 No. 61	 No. 150
<p><b>CONTAINER-HANDLING PROBLEMS? LET MORSE SOLVE THEM!</b></p> <p>There's a Morse product for every container-handling job. Write for free folder showing complete small equipment line, and for catalog sheet of any item of special interest.</p>			
 No. 32	<p>No. 150 Hand Truck Accommodates containers from 25" to 45" long.</p>		
 No. 41	<p>No. 61 Drum Plug Wrench will remove or tighten 95% of all drum plugs.</p>		
 No. 18	<p>No. 40 Drum Cradle Truck with four 3" diameter wheels.</p>		
 No. 10	<p>No. 13 Drum Dolly of 2 1/2" steel lip; overall height 6 1/2"; diameter 24".</p>		
<p>No. 32 Drum Uprigger with 1/4" hook to clear largest chime.</p>			
<p>No. 41 Drum Lifting Hook with 1,000 lbs. capacity.</p>			
<p>No. 18 Bottle Tipper safely handles 5 gal. glass bottles.</p>			
<p>No. 10 Universal Carboy Rocker for conventional size carboys with outlet 20" above floor.</p>			

MORSE Mfg. Co., Inc.  
E. Syracuse, N. Y.

#### CLIP TO YOUR LETTERHEAD:

MORSE MFG. CO., INC.  
785 W. Manlius St.  
E. Syracuse, N. Y.

Send me your free folder, No. 1057, showing complete line of small equipment.

push the lawnmowers in groups. We have flower gardens prepared, planted and maintained by patients. We paint the insides of our buildings, not once, but many times by patients who are painters by trade, or require shoulder activity on their particular job. By graduating these activities the patient gains confidence in his ability to handle his own work.

### Regaining Confidence

We have the shortest railway in Canada, which is frequently raised and lowered by injured railway personnel. For the plasterer, we have an area of wall which is continually being plastered to test the man's skill in plastering; for the bricklayer we use the bricks of his trade and allow him to re-establish the fact that he can bend, if he is a back case, or lift and handle bricks, if he is an arm or shoulder case.

He may also carry the hod to gain confidence in ladder climbing. We also have provided a boxcar for railway men who have to climb and walk, and otherwise handle a boxcar. All these activities are used on a graduated basis to regain the conditioning of the workman for his previous occupation.

### Psychological Services

If a medical or surgical consultant is required on case, we refer these men to specialists. In our particular area the staff of the University of Toronto helps us sort out difficult problems regarding treatment. One year ago we acquired the services of two highly skilled psychologists to evaluate a man's potential for work, to give aptitude tests to those who must change occupations, and assist us in counselling patients who are not responding to the program. We represent as large a psychological unit as there is in this type of work, because our program stimulates psychological health.

A question commonly asked us is, "Do you have out-patients at your Centre?" We do not. We can better rehabilitate the patient if

he remains for the entire treatment day. By doing this we can control his daily routine.

In addition, we provide him with recreational facilities during the off hours and evenings. A patient who takes our program is required to maintain a reasonable habit as far as work hours are concerned. He is up at 7:30 a.m. for breakfast at 8:00, and commences his daily six-hour program by 8:30 a.m.

Every patient is required to walk a minimum of two to three miles a day. Actually most of our staff cover the same distance. This is true without any other treatment consideration—about five to 10 times the distance he would walk while at home. There are no places nearby to obtain food other than that provided at the Centre.

### Promptness Vital

Consequently, our patients are reasonably prompt at meal hours, and this keeps them in touch with the type of control most are accustomed to in industry. The program is on a timetable basis, which requires their attendance—and their attendance is checked. This, again, is supervision comparable to that in industry.

When the patient is sufficiently improved to return to employment, we arrange his discharge from the Centre. Approximately 80 per cent of our patients return immediately on discharge. This is arranged through our industrial placement officers during the patient's stay at the Centre. They contact the patient's employer and try to give him an idea when the man will be available for work. From the medical side, the original attending doctor is informed by a full medical report on his particular patient every two weeks.

### The Real Test

No matter what type of program is set up, we cannot really duplicate all aspects of a man's occupation, and therefore, return to work represents the fourth stage in the man's recovery.

The fourth stage means returning to old friends, to areas where his skill was used before, but

where he tests his real ability in competition, and must not only cooperate, but cooperate and produce at the same time. This is an added factor which is most difficult to duplicate.

We, therefore, ask our employers to consider this fact, and many patients receive some form of work modification. The duration of the modification varies with the individual case.

The employers in our province assume a moral obligation in the vast majority of cases to take back their injured workmen. This is a purely moral obligation, because no employer is, by law, forced to accept a workman after injury. We feel that those who do not return to work represent the failure from the Centre, even though they may have recovered sufficiently to become independent.

We like to feel that there is a place back in industry, since each of these men came from industry. We do not want to see a scrap pile

of broken, unproductive bodies, which represents people whose whole aim in life has been shattered by an industrial accident. However, some end this way despite all our efforts.

### Accepting the Future

The greatest contribution to lessening serious industrial disablement is preventing the accident which has caused the disablement. If it does occur, however, there is a program of activity led by a team of dedicated people, from the sweeper to the doctor, whose only interest is locating a solid road to recovery for the injured workman.

We do our utmost to abolish disability which can be corrected by treatment. But if this is impossible we then assist the patient in accepting the disability, and attempt to motivate him to come out with an accepted disability with which he will meet his future in the industrial world.

## CIGARS-CIGARETTES-MATCHES

immediately extinguished  
...with  
**SIPCO DUNKING STATIONS**

Fire Hazards from Smoking are a problem  
**EVERYWHERE.**

**STOP FIRES BEFORE THEY START—with SIPCO DUNKING STATIONS.**

Heavy duty CAST ALUMINUM canisters—guaranteed 3 years against breakage. Partially filled with water, they drown the "smoke". **NO FIRE HAZARDS — NO ODORS — NO UNSANITARY CONDITION.**

Lift off the canister, flip back the lid, dump it and the cleaning job is done.

Available in over a dozen different **STANDARD** and **JUMBO SIZE** models. Choice of black crinkle or bright polished **DELUXE** finishes to suit your particular requirements. **NEAT, ATTRACTIVE — USED EVERYWHERE — OFFICES, CLUBS, LOUNGES, HOSPITALS, HOTELS, SHOPS, RESTAURANTS, INSTITUTIONS, SCHOOLS, ETC.**

**NEW MODEL 4J**  
Designed for permanent mounting on walls, posts, columns, etc. in public areas. Eliminates pilfering problem. **JUMBO** size canister furnished with light weight, rugged glass-fiber inner-liner. Flip back the lid—lift out the inner-liner and dump it. Inner-liner fits all **JUMBO** size SIPCO canisters and is available separately.

**MODEL 1JD**  
**JUMBO** size **DELUXE FLOOR MODEL**. Heavy weighted base and attractive, eye catching sign. Height 42"—weight 26 lbs. Ideal for halls, aisles, landings, etc. Also available less sign (**MODEL 1JWS**). **WRITE FOR ILLUSTRATED BROCHURE.**



# STANDARD INDUSTRIAL PRODUCTS CO.

DEPT. 8 • 920 N. GARFIELD AVE. • PEORIA, ILLINOIS



**GET 5-WAY PROTECTION**

FOR PERSONNEL, PROPERTY, PRODUCTION WITH

**Spa-Fla®  
WELDING SHIELDS**SELF-STANDING,  
PORTABLE

With versatile Spa-Fla Welding Shields you get low-cost protection that can't be duplicated in your own shop at twice the price! Made with welded galvanized wire insert. Four approved fabrics to meet your specific needs — UL Approved heavy weight yellow duck, RAY-TEX aluminum vinyl, TUF-TEX brown vinyl, and WELD-TEX neoprene-coated glass fabric. Wide variety of sizes and styles.

**OTHER FROMMELT PRODUCTS FOR PLANT AND PERSONNEL SAFETY** — include a complete line of welding curtains, protective covers, asbestos heat curtains, and aluminum-coated RAY-TEX welding blankets, radiant heat curtains, fire and insulating blankets, and portable room partitions.

**WRITE FOR FREE LITERATURE**

Fabric samples, prices, complete information on all safety products.

**FROMMELT INDUSTRIES**  
DUBUQUE, IOWA

A Name To Remember For Approved Safety Products

- ① FOR ON-THE-JOB REPAIRS
- ② FOR OVERHEAD JOBS
- ③ FOR PRODUCTION LINES
- ④ FOR ISOLATING DANGER AREAS
- ⑤ FOR OUTDOOR WIND BREAKS



PROTECTION  
WHEN YOU  
NEED IT . . .  
WHERE YOU  
NEED IT

PREVENT  
COSTLY  
ACCIDENTS**Wire from Washington**

—From page 17

created by external and internal radiation hazards in uranium mining (2) basic metallurgical and chemical works in which radioactive ores are processed and factories where natural radioactive substances are manufactured; and (3) problems of occupational exposure in medical application of radiation.

The Joint Federal-State Action Committee, a special committee of 10 state governors and seven federal officials, formed as a result of the President's suggestion that the states take over certain functions now performed by the Federal Government (see "Wire," August 1957) recommended to the President the amendment of the Atomic Energy Act to give states added responsibility in promoting and regulating peaceful uses of atomic energy. This would be in such fields as public health, safety and inspection, and in the enforcement of standards not in conflict with federal standards. In his Budget Message, the President called this "a long overdue experiment in public administration and finance," and proffered the Administration's cooperation.

A hearing examiner ruled that among the factors justifying relief for a government contractor from ineligibility under federal safety and health requirements, were membership in the National Safety Council and the winning of safety awards from local councils affiliated with the National Safety Council.

The Interstate Commerce Commission amended its regulations to require motor carriers, except private carriers of property, to report all accidents occurring in intercity service, including those in intrastate commerce, where personal injury or death is involved or where property damage reaches \$100. Special requirements apply to transport of explosives or other dangerous articles. ICC also amended its Motor Carrier Safety Regulations in respect to reports on hours of service of drivers.

**Highway Safety.** Senator Monroney (Okla.) stated his intention

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CAUSTICS and CHEMICALS**  
*Instantly! Thoroughly!*

ACCIDENTS with caustic chemicals strike with shocking swiftness—and Haws Drench Showers are instantly ready to deliver relief just as fast! A solid downpour washes away destructive materials—saving seconds until medical aid arrives, possibly averting serious injury and excessive compensation claims. Haws Drench Showers can help you! Write for details and illustrated literature.

**MODEL 8935**—Drench shower augmented by Haws eye-wash fountain. A complete safety station—always ready!

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Circle Item No. 76—Reader Service Card



to sponsor a bill creating a presidential commission to deal with traffic accidents. The time had come, he said, for the Federal Government to tie together all the scattered safety efforts now under way and try to reduce accidents. The first thing the Commission could do, the Senator stated, was establish a nationwide, uniform system of accident reporting. He foresaw the possibility of an interstate driver's license required of all motorists crossing state lines; applicants would be tested and their driving records closely scrutinized. Other tasks for the Commission, he said, were drafting and working for adoption of uniform traffic codes, and proposals for new safety design features for automobiles.

The Supreme Court of the United States refused to consider an appeal from a California decision upholding a California statute prohibiting driving at "speed greater than is reasonable or prudent . . . and in no event at a speed which endangers the safety of persons or property." The California court had rejected a claim that such statute was void for vagueness.

**Aviation Safety.** Although the number of active aircraft increased during 1956 by some 7½ per cent over 1955, the CAA reported that 1957 was the second safest year in air carrier history, with only two-tenths of a passenger fatality per 100 million passenger miles, compared with five-tenths for 1956. (The best record was one-tenth in 1954). The CAB's year-end report says that commercial air traffic was almost six times safer than auto transportation in 1957. Its figures show 67 passenger fatalities for 1957 compared to 143 in 1956. For the sixth successive year, the fatality rate was less than one per 100 million passenger miles flown; this the CAB compared to an estimated rate of auto fatalities of nearly six per 100 million passenger miles. CAB described the 1957 air safety record as "practically unparalleled in modern transportation history."

CAA issued a rule-making procedure to amend its Air Traffic Rules, so as to increase the ceiling

from 1,000 feet to 1,500 feet and the visibility from 3 to 5 miles for uncontrolled flight in a control zone of designated high density airports; simplify the cruising altitude requirements; and establish criteria for ceiling and visibility conditions below which an instrument approach would be required.

**Labor.** A report of the AFL-CIO Department of Research urged unions to consider improvement of existing safety conditions

through collective bargaining. According to the report, work injuries cost 6 times as much lost work in 1956 as strikes. "Many safety programs have sagged into a routine," claimed the report, and re-examination and improvement was urged. The report suggests, among other things, a pledge by management to provide safe and sanitary conditions, specific written requirements in especially important matters such as equip-

Circle Item No. 77—Reader Service Card

## WEAR PROOF Rubber Matting

GREATER PROTECTION - BEAUTY - SAFETY

### SHAD-O-RUG

- Heavy duty live rubber
- Standard 48 in. widths in black, red, tan or green
- Also available in grease, oil, chemical proof NIRU (grey or white)
- Extra durable — Economically priced

### CROSS RIB RUNNER

Same exclusive "V" Rib. Easy to clean! 48" or 36" width, in black, red, green or tan — NIRU in grey or white.

### WINDSHIELD WIPER ACTION

1. Dirt is scraped off shoes by heavy duty "wipers."
2. Dirt falls into slots for easy cleaning.

SEE YOUR DISTRIBUTOR OR WRITE DIRECT

MADE BY THE OLD RELIABLE

**WEAR PROOF MAT CO.** 2156 FULTON ST., CHICAGO, ILL.



Free sample when requested on company stationery.

## CUT DOWN NOISE WITH THE S M R EARSTOPPER

Soft, comfortable, resilient, the SMR EAR STOPPER adjusts itself to all shapes, turns and movements of the ear canal. Tends to anchor itself in the ear. Has a long life and is reasonable in cost. Furnished in a plastic case. Forty-five cents per set in gross lots.

**SURGICAL MECHANICAL RESEARCH INC**  
1985 Beverly Blvd., L.A. 57, Calif



ment and rules for safety facilities, and negotiation of definite procedures, including safety committees for handling safety matters.

**Marine Safety.** A member of the Federal Maritime Board disclosed the following federal maritime safety activities: (1) institution of special radar training courses for ship officers (2) start on the preparation by the United States Government of its position

in contemplation of an international conference to be held sometime in 1959 or 1960 for the purpose of making recommendations for the revision of the International Convention for Safety of Life at Sea (3) award of contract by the Maritime Administrator for an 18-month study of marine accidents and the safety considerations that should follow therefrom in the construction of nuclear powered ships.

A National Small Boat Safety Conference was held at the invitation of the Secretary of the Treasury, and in conformity with the suggestion of the House Committee on Merchant Marine and Fisheries to gather the leaders of the small boat industry to discuss ways and means of countering the mounting boating accident record. The Conference adopted 19 recommendations relating to education, accident statistics, equipment regulations, and construction standards. Among these were the following: the adoption of standardized boating safety courses in public schools; all persons engaging in pleasure boating be urged to know how to swim or to wear life-saving devices when on board boats; Small Boat Safety sessions be included in the National Safety Congress; a single federal agency be designated to compile and disseminate national boating accident statistics (with the Coast Guard to act as an interim clearing house); repeal of the equipment provisions of the Motorboat Act of 1940 and substitution of authority to the Coast Guard to establish equipment regulations; and the convening in 1959 of another National Small Boat Safety Conference.

## Award-Winning Team

—From page 29

for each of the other shifts. Members are permanently assigned and low employee turnover reduces the training problem to almost nothing.

Currently, all employees are being instructed on how to pull alarm boxes to report a fire.

**Safe Practices.** Procedures for a variety of operations, though unwritten, are firmly established and enforced. For instance, no man may climb to the upper portions of the blast furnace unless he is equipped with a gas mask, and accompanied by another man who also is protected by a mask, and someone on the floor always knows they are aloft.

Training isn't much of a problem at Interlake. One reason is the very low turnover rate—the average age at the Chicago plant

Circle Item No. 79—Reader Service Card

## Take the hazard out of Floor Maintenance



WITH HOLT  
EXPLOSION  
PROOF  
COMMANDER

Holt Commander is designed expressly for safe maintenance of floors in oil refineries, atomic research plants, powder factories, and other hazardous industries. There's no outside wiring. Entire unit, from brush to handgrip, is constructed, sealed and safety-tested to prevent sparks and static that might ignite gas, dust, fumes or vapors. Static eliminator wire in brush, a Holt exclusive, even prevents shocks to operator.

With this one machine and Holt Quick-Change Attachments you do a complete floor maintenance job—polish, wax, buff, scrub, etc. Dual handles give operator better control; reduce fatigue. Made in 16 and 20" sizes. For full story write now to Dept. W2

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669 - 20th St., Oakland 12, Calif., or 272 Badger Ave., Newark 8, N. J.

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Write for Catalog

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is 45 and a man is looked on as a beginner if he has less than 15 years' service. A few employees are in their seventies.

J. B. (Jim) Kaminski, assistant superintendent of the blast furnace, says that when company-supplied personal protective equipment was being introduced more than 20 years ago there was some resistance to wearing it. Now, he points out, safety education and the passage of time have made it accepted. Not until last July were all employees required to wear hard hats. Since then, universal head protection has become fully acceptable.

The plant has yet to fire a man for breaking safety rules. Very rarely, a repeating violator must be disciplined with a two- or three-day suspension. In these cases, union representatives always sit in when the man is judged.

**Medical Facilities.** There are two gleaming, well-equipped first-aid rooms—one at the coke ovens and one at the furnace plant. A first-aid man is on duty at each shift at each plant and a physician calls for two hours every morning, Monday through Friday. He is also subject to call 24 hours a day.

Most calls for first-aid are for dust or foreign bodies in the eyes. If these can't be easily and quickly removed, the employee is sent to an eye specialist nearby. The company hasn't had a serious eye accident in 10 years.

Stepped-up goggle enforcement recently has brought foreign-body eye cases down from about 30 a month to six per month.

**The Future.** Ralph Allen's work is far from done. Of course, a safety man's job never ends, but he is always striving to make progress.

Safety at all Interlake properties is not just a slogan. Foremen, union representatives, and workers are working together constantly to improve conditions for the convenience as well as safety of all its members. A friendly, cooperative spirit, which helps no end in the accident prevention program, is readily detectable by a visitor.

## Safety Goes to the Fair

—From page 88

William A. Callahan and L. O. Arens of the State Industrial Accident Commission were present, with Callahan cutting the ribbon to open the event. He was introduced by O. H. Smeltz, district supervisor of the Accident Prevention Division. Other guests included mayors of other partici-

pating cities, and county officials.

Five major divisions, industrial, traffic, agricultural, home, and civil, were selected as the basis for judging the exhibits, with first, second, and third prize ribbons awarded to the winners.

A safety poster contest, conducted by the committee in the elementary schools of Jackson and Josephine counties, provided a lot of interest and drew 80 entries. Four top cash prizes and 18 hon-

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# HELP

STOP ACCIDENTS • CUT TIME LOSS  
REDUCE INSURANCE COSTS • SAVE LIVES!

install and use NEW  
**MORRISON**  
**REVOLVING CUP GUARDS**  
... on your portable tools.

REVOLVES WITH WHEEL



HELP STOP costly accidents with MORRISON Revolving Cup Guards! Safety codes and laws REQUIRE guard protection. Specify MORRISON for maximum safety... lighter weight... lower cost... greater strength. Full protection for operator with minimum interference with work.

Remember, MORRISON also makes standard wheel guards. There is a MORRISON Guard for every application... all are made to comply with American Standard Safety Code.

See your grinding wheel supplier or write:

**MORRISON PRODUCTS INC.** 16816 Waterloo Road, Cleveland 10, Ohio

## "VEKI" SAFETY CAP

Designed for  
**GREATEST INDUSTRIAL SAFETY**

VEKI's larger, roomier, elastic-type snood is designed specifically for enclosing more hair than any conventional type cap... full protection for all hair all the time! Front of twill. Back is made of mesh—can also be had in solid or flame-proof materials. Navy blue, and brown. Adjusts to all head sizes. Descriptive literature on request.

Manufacturers and distributors of a complete line of safety clothing and equipment. Write Dept. N-2 for information regarding your needs.



**KENNEDY-INGALLS, INC.**

3735 NORTH 35TH ST., MILWAUKEE 16, WISCONSIN





orable mention awards of NSC pens and safety games were made to the winners in the various categories of safety.

Business, management, labor, farm, civic, fraternal, and school groups all gave the event valuable support, along with the federal, state, county, and city governmental agencies. This helped to make the fair a real community effort.

Highlights of the interesting and

informative day included the presentation of safety and first-aid demonstrations, continuous showing of safety films in a special production room, and outside displays of civil defense units, disaster cars, a live "safety" donkey, and a fully equipped radar car. A beautiful, sunny day helped attendance at these attractions.

An afternoon demonstration of pole-top resuscitation by linemen

of the California-Oregon Power Company and an evening stage show were added attractions.

As one who has been in the advertising and public relations field for many years, I can think of no better method of reaching the family unit than by staging a community event where everyone participates. Our slogan, "Safety is a Family Affair," set the pace for our efforts, and the universal appeal, "Let's go to the Fair," brought the crowds to learn that safety can be fun!

Circle Item No. 83—Reader Service Card

# SAFETY FACTS for Industry

**MOST SAFETY DIRECTORS INSIST ON**  
*Safe-Hi LADDER SHOES!*



**BECAUSE *Safe-Hi* LADDER SHOES ARE U/L APPROVED FOR ALL SURFACES, THIS EQUIPMENT ENABLES WORKERS TO PERFORM LADDER JOBS WITH SAFETY AND EFFICIENCY—NO NEED OF "HELPER" TO HOLD BASE OF LADDER!**

• A 1949 REPORT OF THE N.Y. WORKMEN'S COMPENSATION BD. SUMMARIZING 21,000 FALL ACCIDENTS, DISCLOSED **SLIPPING LADDERS** AS THE PRINCIPAL CAUSE OF LADDER ACCIDENTS.

↑ **SELF-DUMPING SHOE FOR ICE, SNOW, GRAVEL, ETC.**

**ALSO AVAILABLE—NON-SPARK LADDER SHOES FOR REFINERIES, GRAIN ELEVATORS, MUNITIONS PLANTS AND ALL INDUSTRIES WHERE SPARKS ARE A HAZARD.**

**DIAGRAM SHOWING ACTUAL HOLDING POWER OF *Safe-Hi* LADDER SHOES UNDER CONDITIONS INDICATED FROM AUTHENTIC MEASURED TESTS.**



14° SAFETY ANGLE

SMOOTH CONCRETE—COVERED WITH ALUMITE  
WAXED HARDWOOD—DRY  
LINOLEUM—DRY  
LINOLEUM—WET  
SMOOTH IRON—SOAPY  
TERRAZZO—DRY, SMOOTH CONCRETE—WET  
WAXED HARDWOOD—WET

**OTHER *Safe-Hi* LADDER ATTACHMENTS**



**POLE GRIP**  
HOLDS TOP OF LADDER ON ANY POLE, PIPE OR CORNER.



**WALL GRIP**  
HOLDS TOP OF LADDER AGAINST ANY WALL.

**ROSE MANUFACTURING CO.**  
2700 W. BARNER PLACE  
DENVER 4, COLORADO

## Safe-Hi

DENVER

## Support for the President's Action Program

—From page 50

**Employees:** Internal support of the program will include publicity in employee publications, and special letters to employees from Mr. Petersen or appropriate heads of Standard's operating companies.

**Shareholders:** Announcement of the program will also appear in the shareholder publications which receive wide distribution.

The program briefly outlined above demonstrates how business can lend practical assistance to the President's Action Program, as a matter of enlightened self-interest. Although businessmen may not be as directly involved in traffic safety, as, say, law enforcement officers, the business community still has ample motives to be deeply concerned over this serious national problem.

Motive No. 1 stems from the fact that the economic loss to the nation from traffic accidents is appalling—it was recently set at more than \$7 billion. In addition to their direct monetary cost, it has also been estimated that traffic accidents are second only to the common cold as a cause of employee absenteeism.

Lastly, of course, there is the motive of public service. A traffic safety program, demonstrating as it does a well-developed sense of civic responsibility, is bound to be rewarding to the sponsoring firm in terms of good public relations.

## Now YOU Can Know... Definitely



**The BREATHALYZER**

If your employee is ill rather than suffering from a hangover. Stop accidents and loss of production with

**The Borkestein BREATHALYZER**

The accurate provable way to determine whether alcohol is responsible for decreased efficiency or accident proneness. Let us give you a **FREE** Demonstration or send for pamphlet N-442

**STEPHENSON CORPORATION**  
IND. BARK NEW JERSEY

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## Diary

—From page 46

It jolted me enough to make me tell Lee to try applying his ideas at a meeting on first aid in another department.

There were a dozen foremen present. They came straggling in to the meeting, scattering out in twos and threes around the room, obviously prepared to be bored. I sat in the back row, saying nothing. A minute or two after the last ones came in, Lee walked in the door.

He made a fairly normal opening to the meeting, telling the inevitable funny story to warm them up, getting only a mild laugh from the group. He looked at them with a kind of wry grin, and then he said, "Oh, well, I don't get paid as much as George Gobel, so you can't expect the gags to be good." Then he asked which of them had had first aid training. They all held up their hands. He looked surprised and pleased (though he knew very well that every foreman in the unit had had the training). "Look," he said, "I need some help from a couple of good first aid men. You, Mike Harper and Les Dennet." He took the two off in a corner, and then nodded, smiling. Then Mike and Les left the room. Next he called another pair up by name and went through the same procedure. When they had left the room, he turned to the remaining eight men and split them into two groups of four. "You men in the first group, you're going to be rubbernecks at the scene of an accident. When the accident happens, you swarm around, get in the way, make stupid suggestions. Keep it natural, but a kind of dumb natural. Now, the rest of you are observers. Watch and see what happens, and afterward, you'll each report what you see."

The staged incident was simple enough. Mike and Les came in, pretended to be working on the electric light. Suddenly the light blinked, Les slipped off a step-ladder to the floor, on top of Mike. As they did so, they threw open their coats, revealing hand-lettered signs on their chests. Les'

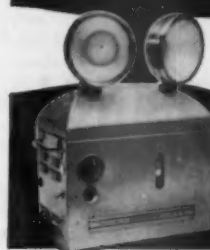
read "I'm not breathing" and Mike's "I've got a broken arm." Our rubbernecks ran to them at the same time that the other two men rushed into the room carrying first aid kits. It was a poor demonstration of first aid, but it was lots of fun for all concerned.

Then the observers reported on what was done right and wrong. That was followed by a general gabfest which centered, not on first aid technique, but what we

ought to teach the ordinary employee to do to keep from getting in the way at an accident.

I still don't know whether we accomplished anything. But I'm certain this afternoon's foremen's meeting sent out a happier group of men than the morning meeting did. Maybe, after all, Lee and the motivation research, group dynamics boys have something to teach guys like me who have to be teachers.

Circle Item No. 85—Reader Service Card



## PROTECT AGAINST the consequences of LIGHT FAILURE

PANIC  
Injury  
DAMAGE SUITS  
THEFT

### A CASE HISTORY from our files . . .

The Safety Director of a large Eastern distillery had recommended installation of Carpenter Automatic Emergency Lights. Procrastination was responsible for delaying purchase for several weeks, with the result that a simple blown fuse caught everyone unprepared.

During a night shift, lighting circuits to the Bottling Department went dead, while the machinery, fed by high-voltage lines, kept clanking on. In the resulting panic, women stumbled into the racing machines. Exit stairwells were darkened, too, and falls added to the toll. Only chance prevented loss of life.

Within days, the management installed Carpenter Automatic Lights throughout this plant and eight others.

The tragedy in this instance was the delay after the hazard had been recognized, and proper protection decided upon . . . For just one WATCHMASTER AUTOMATALITE would have prevented the misfortune. Each AUTOMATALITE now stands as a mute yet tangible symbol of the need for immediate protection.

### Only "WATCHMASTER" AUTOMATALITES have

**EXCLUSIVE** • Powerful, sealed-beam floodlights with strong center punch to illuminate long aisles and pin-point exits or critical stations, etc.

**EXCLUSIVE** • "Hydro-Caps" to prevent water loss from batteries. Requires addition of water only once every year or two. Lowers maintenance costs.

## CARPENTER MFG. COMPANY

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THE LOW COST  
NO MAINTENANCE  
NOISE ABSORBER

reduces  
fatigue and  
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## QUIET FACTORY NOISE with SONOSORBER

GUARANTEED RESULTS! FREE ENGINEERING  
SURVEY, ANALYSIS and ESTIMATES. Write Today.

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711 THIRD AVENUE, NEW YORK 17, N. Y.

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## The President's Medal

Awards made by the National Safety Council for successful application of artificial respiration

JAMES C. GALLERY, oiler-driver of crane, Boulet Transportation Co., Metairie, La.—electric shock.  
ALLEN F. WRIGHT, line foreman,

Florida Power Corp., Clearwater, Fla.—drowning.

ROBERT G. WOODARD, SR., engine operator, Texas Natural Gasoline Corp., Midkiff, Tex.—convulsions.

N. D. YOAST, drilling foreman, The Texas Company, Watford City, N. D.—gas asphyxiation.

SGT. GEORGE A. HUMPHRIES, USA, U.S. Army Garrison, Fort Gordon, Ga.—drowning.

WILLIAM H. LEONARD, ground-

man, Clinton County Electric Corp., Germantown, Ill.—electric shock.

FITZ RANDOLPH MARSTON, carpenter, Tidewater Construction Corp., Warner, Va.—drowning.

FLOYD J. HEFT, SR., open hearth helper, Bethlehem Steel Co., Bethlehem, Pa.—drowning.

## ASME Expands Meeting Schedule

The heaviest schedule of national meetings and conferences in its history is announced by The American Society of Mechanical Engineers. The Society will sponsor or co-sponsor 24 major events during 1958 dealing with dozens of technical subjects. All ASME meetings are open to interested persons, whether members or not.

In addition to its own meetings, ASME will take part in the 1958 Nuclear Congress to be coordinated by the Engineers Joint Council in Chicago, March 16-22, and in the Third U. S. Congress of Theoretical and Applied Mechanics, June 11-14, at Providence, R. I.

Typical of the trend toward specialized meetings are four new conferences to be sponsored by units of the Society during 1958 including one in Pittsburgh, April 14-15, under the newly formed Maintenance and Plant Engineering group of ASME. Other conferences to be held for the first time this year are Production Engineering, Worcester, Mass., April 10; Materials Handling, Cleveland, Ohio, June 9-12, and Process Industries, Buffalo, N. Y., September 15-17.

Beginning March 17, the Society will join the American Rocket Society in a four-day ASME-ARS Joint Aviation Conference to be held in Dallas. During September the International Conference on Air Pollution, second event of its kind, will be held in New York under sponsorship of the ASME Air Pollution Controls Committee.

Genius may have its limitations but stupidity has no such handicap.

Circle Item No. 87—Reader Service Card

## For Safety, Here Are RUGGED CANS!

Listed and labeled by Underwriters Laboratories and Factory Mutual

### THE COMPLETE LINE

- Strong quality construction
- No waste, no splash, no spill
- Self-adjusting guard cap prevents leak
- Safe for handling all explosive and flammable liquids

Order from your supplier or write for information

Complete Eagle Catalog is available free

Eagle Products are also sold in Canada



MANUFACTURING COMPANY

Wellsburg, W. Va.

Serving Industry Since 1894



Trigger Type  
1 qt., 2 qt., 1 gal.

Free-Swing Type  
2½ and 5 gal.

## ONE ALL PURPOSE HAND LOTION

### Acts Like An Invisible Glove

#### PROTECTS:

- Factory Workers against—solvents (kerosene, gasoline), grease, skin allergies due to handling: plastic, fiberglass, metal, lacquer, minor cuts and burns.
- Outdoor Workers against—poison oak, poison ivy, insect bites, minor cuts and scratches.
- Office Workers against—carbon paper, Ditto, dust, grease, minor paper cuts.

It is antiseptic, medicated and has a pleasant aroma.

SEND FOR FREE SAMPLE

(Request on company stationery, please.)

**VAN FAIRE CO.,** 595 E. Colorado, Pasadena, Calif.



Circle Item No. 88—Reader Service Card

## Calendar Contest Winners For December



"I know when to quit," said McGee.  
"Overwork? Overeat? Not for me!"  
But when Mac's in a car,  
No trip is too far

How would you have completed that limerick?

Mrs. Fred A. Hasty, wife of a chemist at the Koppers Company, Woodward, Ala., won the \$100 first prize in the National Safety Council's "Save-a-Life Line" contest with this line:

Mac should rest, to drive best, as should we.

The contest appears monthly on the back pages of the Council's calendar. The theme for December was "Know Your Limitations."



### GETS-A-LITE GUARD and GUIDE

Quickly and Easily Installed  
by Anyone — No  
Tools Needed!

- Simply slip GETS-A-LITE GUARD AND GUIDE over the fixture, as illustrated.
- Made of indestructible spring steel wire. Nothing to break, get out of order or replace. Will last indefinitely.
- Once installed, GETS-A-LITE GUARD AND GUIDE is NEVER removed.
- Nothing to unlock, fuss with or lock, when changing lamps.
- GETS-A-LITE GUARD AND GUIDE actually steers lamp into socket, enabling maintenance man to change lamp in 10 seconds!
- Available for 40 watt and 100 watt fluorescent lamps.

GETS-A-LITE CO. — Dept. NSN-18  
3945 N. Milwaukee Ave., Chicago 41, Ill.

Circle Item No. 89—Reader Service Card

Lenore Pyle, Council member who lives in Denver, Colo., won the second prize of \$50 for this line:

Tranceportation like this must not be.

Third prize of \$25 went to Rev. Aloysius P. Dehnert of Quigley Preparatory Seminary, Chicago. His entry was:

Heed your BODY when NODDY, McGee.

The 30 winners of \$5 prizes are:

Louis Grossman, Stein, Hall & Co., Long Island City, N. Y.

Mrs. Ann S. Lacy, Mississippi Chemical Corp., Yazoo City, Miss.

Jos. Holbrooke, Jr., Quebec North Shore Paper Co., Baie Comeau, Quebec, Canada.

Mrs. H. R. Bierhorst, (Individual Member), Jacksonville, Fla.

Mrs. James R. Thompson, Employers Reinsurance Corp., Kansas City, Mo.

Fred L. Payne, Liberty Mutual Insurance Co., San Francisco, Calif.

George Gambler, P B & N E, Bethlehem Steel Co., Bethlehem, Pa.

Mrs. Harold E. Curtis, (Individual Member), Brooklyn, Conn.

Mrs. Paulene Young, Corn Products Refining Co., North Kansas City, Mo.

Mrs. Edna Trevillian, (Individual Member), Chloride, Arizona.

Mrs. Ruth Zaimor, Pratt & Whitney Aircraft Corp., Div. of United Aircraft Corp., East Hartford, Conn.

Warrick E. Lee, Bell Telephone Co., Carbondale, Pa.

Robert W. Kowal, Standard Oil Co. (Ind.), Whiting, Ind.

John A. Pearce, Brush Beryllium Co., Elmore, Ohio.

Larry Kelley, Yellow Cab Co., Los Angeles, Calif.

Mrs. J. R. Wood, Eastman Kodak Co., Rochester, N. Y.

Edwin S. Rice, (Individual Member), Kansas City, Mo.

Miss Susie Mae Smith, (Individual Member), Tuscaloosa, Ala.

Miss Marion L. King, (Individual Member), Pittsburgh, Pa.

Mrs. Frances Fischer, U. S. Post Office, St. Louis, Mo.

Mrs. Shirley L. Garvin, Kraft Foods Co., Pocatello, Idaho.

John C. Perry, Consolidated Edison Co., New York, N. Y.

Chas. W. Dittick, Univ. of California Medical Center, San Francisco, Calif.

L. J. Burke, State Health Dept., Seattle, Wash.

Dorothy H. Duckworth, Tennessee Valley Authority, Chattanooga, Tenn.

Mrs. Dean F. Garvin, (Individual Member), Wallingford, Conn.

P. R. Tanick, U. S. Post Office, Minneapolis, Minn.

John A. Stewart, Case Institute of Technology, Cleveland, Ohio.

Mrs. Emil Karchnak, Bethlehem Steel Co., Johnstown, Pa.

Roy Hopkins, Lake Superior District Power Co., Ironwood, Mich.

Circle Item No. 90—Reader Service Card

## THE POSITIVE LADDER SAFETY DEVICE



### CLIMBING MADE SAFE!

If climber starts to fall, device locks in a notch automatically, instantly. Holds securely. Limits fall to 7 inches.

## PREVENTS DEATH AND INJURIES — FROM FALLING

**AUTOMATIC, POSITIVE.** Will instantly catch and hold workman if he starts to fall, even if unconscious. Requires no attention from climber; he climbs in normal manner. Inexpensive. Easy to install; 3 men can clamp it to ordinary ladder in few hours. Clamps to any rung ladder, peg ladder, pole or framework. No welding or cutting. Notched rail hot-dipped galvanized. Entire equipment rust and corrosion proof. Can be kept free of ice by applying heat inside the carrier rail. In use approx. 10 years. Approved by Safety Engineers and Govt. Agencies throughout country. Patented. Manufactured only by

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1024 Burbank Blvd., P.O. Box 1052  
BURBANK, CALIFORNIA

## SAFETY ENGINEERS

### Foreign Employment

Career opportunities for graduate engineers with minimum 5 years practical safety engineering experience in oil operations, heavy industrial or chemical industries. Must know A.P.I. codes and be familiar with hazards peculiar to oil industry. One capable of promoting programs; another to provide staff safety designs and process engineering service for over-all company operations. High salary plus liberal all-inclusive benefits conducive to large savings. Excellent community facilities.

Write outlining personal history and work experience. Please include telephone number.

Recruiting Supervisor, Box 263

**ARABIAN AMERICAN  
OIL COMPANY**  
505 PARK AVENUE  
NEW YORK 22, NEW YORK





Let's not clean away  
dollars and man-hours  
with costly, inadequate floor care

**MECHANIZE**

your floor-cleaning with a  
**COMBINATION SCRUBBER-VAC!**



(Powder Dispenser  
and Level Cable Wind  
are accessories)

Wherever *combination-machine-scrubbing* is the practical solution to the floor-cleaning problem, any lesser, slower method is wasteful of money and manpower. A *Combination Scrubber-Vac* applies the cleanser, scrubs, flushes if required, and picks up (damp-dries the floor)—*all in one operation!* Maintenance men like the convenience of working with this single unit... the thoroughness with which it cleans... and the features that make the machine simple to operate. It's *self-propelled*, and has a *positive clutch*. There are no switches to set for *fast* or *slow*—slight pressure of the hand on clutch lever adjusts speed to desired rate. The powerful vac performs quietly. Cable reel is self-winding. Finnell's 213P Scrubber-Vac at left, an *electric* unit for heavy duty scrubbing of large-area floors, has a 26-inch brush spread. Cleans up to 8,750 sq. ft. per hour (and more in some cases), depending upon condition of the floors, congestion, et cetera. (The machine can be leased or purchased.)

Finnell makes Scrubber-Vac Machines in a full range of sizes, and gasoline or propane powered as well as electric models. From this complete line, you can choose the size and model that's exactly right for your job (no need to *over-buy* or *under-buy*). It's also good to know that a *Finnell Floor Specialist and Engineer* is nearby to help train your maintenance operators in the proper use of the machine... to recommend cleaning schedules for most effectual care... and to make periodic check-ups. For demonstration, consultation, or literature, phone or write nearest *Finnell Branch* or Finnell System, Inc., 2202 East Street, Elkhart, Indiana. Branch Offices in all principal cities of the United States and Canada.

**FINNELL SYSTEM, INC.**

*Originators of Power Scrubbing and Polishing Machines*



BRANCHES  
IN ALL  
PRINCIPAL  
CITIES



# New SAFETY EQUIPMENT

Product announcements in this section are reviewed for compliance with the advertising policy of the NATIONAL SAFETY NEWS. Inclusion should not, however, be construed as endorsement or approval by the National Safety Council.



## Fire Extinguishers

A newly designed discharge device is now provided on five carbon dioxide fire

extinguishers to give added protection against Class B and C fires. Each carries the new UL ratings.

The nozzles have five orifice holes. The usual opening in the center of the nozzle discharges parallel with the taper of the horn. The other four openings are placed around the nozzle, 90 degrees apart from each other. Discharge from these four is at right angles to the side of the horn. This placement enables the snow to break into minute particles, giving almost instant change from snow to gas. Bottles equipped with the new nozzles are 2½, 5, 10, 15 and 20. Models 5 and 15 are also Coast Guard approved. For large blazes beyond the capacity of hand portable units, CO<sub>2</sub> wheeled engines are available in 50-, 75-, and 100-pound sizes.

American LaFrance Corp., 100 E. LaFrance St., Elmira, N. Y. (Item 301)



## Lead Vapor Detector Kit

Hazardous concentrations of poisonous lead vapors in occupational areas are easily determined by testing with this new lead-in-air detector

kit.

Use of the kit permits prompt, on-the-spot determination of the weight of lead present in a measured volume of air. Spot test color comparisons reflect concentrations of lead either below or above the maximum allowable concentration of .20 milligrams per cubic meter.

The kit assembly is contained in a lightweight, portable aluminum case which suspends from a shoulder strap to waist height.

Included in the kit are a 500 ml Samplair Pump, two boxes of glass fiber filter discs, a pair of tweezers for handling filter discs, a kit containing two sets of reagents, color standards, and the aluminum carrying case with shoulder strap. With one of the glass fiber filters placed on the pump, five strokes of the pump's piston will draw an air sample sufficient for determining if the Maximum Acceptable Concentration value is exceeded. The degree of color intensity produced by the application of two drops of the reagent solution to the filter determines whether or not the lead vapor content is above, below or equal to the M.A.C.

Mine Safety Appliance Co., 201 N. Braddock St., Pittsburgh, Pa. (Item 302)



## Aluminized Glass Cloth Suit

This fire-entry suit has withstood temperatures exceeding 2,000 degrees F under field

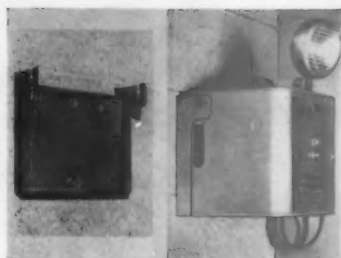
test conditions.

Repeated entries into the test fire were made and it was found that the complete garment could be put on by the wearer unassisted in less than two minutes.

A feature of the suit is the fact that a man can be doused with water while in the flames without fear of scalding. The glass suit weighs less than 26 pounds and gives the wearer excellent maneuverability. Suits similar to the one illustrated are widely used throughout the petroleum, ceramic, fire fighting, aircraft and guided missile, chemical, and public utility fields or wherever extreme heat is a problem.

Fyrepel Products, Inc., Newark, Ohio. (Item 303)

For More Information—Circle Item Number on Reader Service Postcard



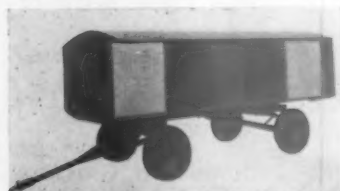
### Emergency Light Bracket

A special bracket which simplifies the mounting of six-volt storage battery emer-

gency lighting units on walls and on other vertical flat surfaces has been developed. The units can be easily removed if necessary. The bracket can be quickly installed on wood, tile or masonry walls, with wood screws, toggle bolts or lag screws.

The new unit, available either separately or with the manufacturer's emergency lighting units, can be bought for less than the cost of custom-made brackets. The bracket has two keyhole slots. Studs and wing nuts on the light unit fit into these to firmly suspend the lighting unit. The open-sided brackets provide a clear view of the pilot balls on either side of the units. These floating balls clearly indicate by their position the state of charge of the battery and the liquid level. Brackets are made of 16-gauge, cold-rolled steel, spot-welded. They have an attractive gray hammertone finish matching that of the lighting unit.

**Exide Industrial Div., Electric Storage Battery Co., Box 8109, Philadelphia 1, Pa. (Item 304)**



### Portable Explosives Magazine

This magazine can be hauled by

a light truck or tractor to the job site. Model 800 has a capacity for more than the average daily requirements of explosives, detonating fuse and caps (8,000 to 10,000 lbs.). Loading and unloading are said to be simplified by 5 large doors, 2 of which are located on either side and one at the rear.

An important feature of the Model 800 is the fifth-wheel type design of the front axle which allows extreme maneuverability.

The magazine is constructed of welded steel throughout and is separated into two compartments. The sides and top are wood lined while the floor is covered with masonite.

**Austin Powder Co., Cleveland 13, Ohio. (Item 305)**

### Heavy-Duty Spectacle Cases

Although eye safety begins with protective eye wear, industrial workers have found that a second safeguard is important. Heavy-duty spectacle cases reduce the danger of lens breakage and are specifically designed for their rigid, protective strength.

Several models are available for various types of

eyeglasses and can be carried in pockets or clipped to a belt.

They are made of tan vinyl and on orders of 100 units are available with a company name or safety slogan.

**The Opticase Co., 150 Dickerson St., Newark 7, N. J. (Item 306)**



### Welding Screen Kit

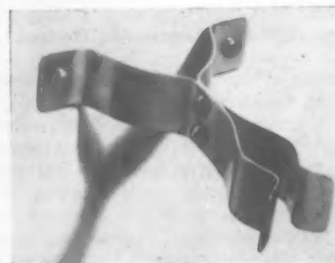
A portable welding screen called the "Porto-

Screen" is being produced in an economical kit. The kit includes hinges, tees, treated fabric, and hooks and is designed to be assembled with any stock half-inch pipe or tubing supplied by the customer.

The screen can be assembled in minutes with an Allen wrench to form a rugged, fireproof welding shield for protection from flash, arc, sparks, splashing, hot chips, or flying abrasives.

The kits are designed around a standard 6' x 12' size with a 6' center section and 3' wings. Special sizes are available. The specially designed cast-steel hinges allow it to be formed completely around the job, or to be folded compactly for storage or carrying. Standard casters can be attached to the vertical tubing sections for easier handling in the shop. The screen kit is available with rugged, heavy-duty yellow or green UL-approved duck which is treated to resist fire, water, and mildew. Grommets are provided for hooks and lacing.

**Frommelt Industries, 290 Main St., Dubuque, Iowa. (Item 307)**



### Steel Bracket-Clip

Originally designed for hanging fire hose attachments, this stainless steel bracket-

clip is now available in three sizes for general industrial use.

The clip has a strong grip, and is impervious to most greases, acids, and oils common in many industrial plants. It comes in sizes to hold articles of 1-, 1½- and 2-in. diameter, but such articles do not have to be round to be accommodated by the clip. It has been used for items wanted out of the way but well in reach such as crowbars or other tools, tote cart handles, nozzles, etc.

**Rockwood Sprinkler Co., Portable Fire Protection Div., 38 Harlow St., Worcester, Mass. (Item 308)**

### Orthopedic Stretcher

This stretcher slides under the body and locks and requires no rolling or lifting. The Robinson Orthopedic Stretcher is designed to remove accident victims from difficult locations without adding to their injuries. It is adjustable and can carry a person up to 7 ft. 3 in. and will sustain a weight of 500 lbs. without strain. A simple adjustment sets the exact length needed for the patient. The stretcher will be valuable in hospitals, police and fire departments, railroads, industrial plants, shipyards, etc.

**A. E. Halperin Co., Inc., 75 Northampton St., Boston 18, Mass. (Item 309)**



**Drum and Barrel Truck**

This steel drum and barrel truck provides easy movement of loads up to 1,000 pounds. It accommodates containers 15" or more in diameter and 24" to 35" in

length. The chime hook is adjustable and locks in any fixed position.

The unit picks up and deposits loads on the floor in tightly packed rows and on pallets up to 8" high. The truck is balanced and a 1,000-lb. load can be held over the center of gravity by just one finger. Large roller bearing wheels with solid rubber tires provide ease of movement over all types of floors and surfaces.

**Industrial Products Co., 2850 N. Fourth St., Philadelphia 33, Pa. (Item 310)**



**Eye Shield**

A high protection eye shield, the Super BAL-guard, has been

developed for industrial workers. It is molded from clear, flexible vinyl and weighs only two ounces. It provides a high degree of wearing comfort and eye safety and can be worn over any type of prescription glasses.

The Super BAL-guard features a 2-way ventilation system to assure a plentiful air supply with no lens fogging. Special double-slot vents around the periphery of the lens give indirect air circulation. Top and side vent holes allow additional fresh air to enter and warm air and vapor to escape. For use where splash, chemicals, or dust hazards are present, the eye shield can be obtained without the top and side holes. The large wrap-around lens is of special importance to bifocal wearers, whose visual field is restricted by ordinary eye shields. The one-piece lens is angled to the face to give more overall and downward vision. It is available in either clear

or green. The lenses can be easily interchanged or replaced by use of a new snap fastener design.

**Bausch & Lomb Optical Co., 635 St. Paul St., Rochester 2, N. Y. (Item 311)**



**Bosun's Swing**

A new, fully adjustable Bosun's Swing has several safety advantages. These include 5,000-pound tensile strength nylon webbing in the riser and waist straps and a 3-inch, four-ply cotton webbing body pad. The nylon waist strap has adjustment loops that allow a perfect fit.

Comfort features of the swing include an optional hardwood seat that straps onto the belt and cannot fall off. The swing is available in all colors.

**Rose Mfg. Co., Dept. E, 2700 W. Barbary Place, Denver 4, Colorado. (Item 312)**



**Floor Sweeper**

The Hydra-Sweeper No. "51," all-purpose power floor sweeper has been designed for use in medium to large

manufacturing plants, airports, etc. Hydraulically driven, the "51" is equipped to do industry's toughest, dirtiest sweeping jobs. The new sweeper also has several operator safety features including one-pedal "magic touch" drive, wrap-around bumper, retractable side brooms and a design that permits the operator to look ahead while sweeping.

It is equipped with one adjustable side broom that allows sweeping aisles 36" to 51" in width. An additional side broom is available, bringing the total sweeping width up to 66". At speeds up to eight miles per hour, the unit is capable of sweeping over 100,000 sq. ft. of floor space an hour.

The exclusive "Magic Touch" hydraulic drive offers many advantages; one-pedal operation, smooth starts and stops, no gears to shift, no clutch to wear out and protection against overload.

The "51" is powerful enough to act as a tow truck. Wheeled loads weighing up to 7 tons can be moved at a speed of 7 mph.

Optional equipment includes a 12" vacuum hose, with nozzle, for cleaning hard-to-get-at places under and around machinery.

**Industrial Sweeper Co., Dept. H-1, 2508 S. Main St., South Bend 23, Ind. (Item 313)**

For More Information—Circle Item Number on Reader Service Postcard





### Skin Lotion

This triple purpose skin lotion is anti-histaminic, antiseptic and skin-conditioning. The anti-histaminic agent prevents and controls allergic or "sensitization" skin rashes. A potent, non-toxic germicide aids healing of minor cuts and scratches and guards against infection. New organic compounds plus lanolin keep the skin soft and healthy and help combat the defatting effects of volatile solvents often encountered in plant operations. The lotion is greaseless, non-sticky and pleasant to use and when applied to the skin it dries quickly to form an invisible, protective film which resists all solvents except water. Dispensers are available from the manufacturer and can be located at convenient spots throughout industrial plants.

**Vanfaire Co., 595 E. Colorado St., Pasadena 1, Calif. (Item 314)**

### No-Fog Liquid Compound

A No-Fog Liquid Compound for the prevention of steaming and fogging of either glass or plastic lenses under severe circumstances is now available. The product can be used on eye glasses, goggles, skin divers' masks, mirrors, windshields, and photographic lenses.

**Carhoff Co., 11706 Kinsman Road, Cleveland 20, Ohio. (Item 315).**



### Contour-Spec

These safety glasses are made in one frame size

of 48mm eye size with F7 lenses to provide wider vision and greater protection in a frame styling that is approved by workers. One size replaces up to ten sizes of conventional spectacles. The hinged bridge permits one size Contour-spec to fit all faces.

The glasses are available in these styles: WCS-F48, flesh color plastic frame with matching perforated side shields and half-plastic, half-cable temples. The standard lens is clear 6.00 C. Super-Tough; WCSG-F48, green color plastic frame with matching perforated side-shields and half-plastic, half-cable temples. The standard lens is 6.00 C. Super-Tough, in shades 1.7, 2.0 and 2.5. They are recommended for flash and glare protection.

**Willson Products Div., Ray-O-Vac, 212 E. Washington St., Madison 10, Wisconsin. (Item 316)**

### Dacron Work Clothes

100% Du Pont Dacron Industrial apparel is highly resistant to damage by acids and corrosive chemi-

cals. These features make the new clothing especially resistant to concentrated hydrogen peroxide. This is particularly valuable to the missile development and allied fields where hydrogen peroxide is a hazard.

The blue or gray dacron shirts, pants, laboratory coats, and coveralls retain a high tenacity and tensile strength even after eight hours of immersion in 90 per cent concentration hydrogen peroxide at room temperature. In addition, the apparel will not ignite even on long-time contact with  $H_2O_2$ . The clothes are resilient, resist wrinkles, stay neat, and wash quickly and easily.

Dacron fabric cannot cause dermatitis and produces no itching or chafing.

**Worklon, Inc., Dept. H, 253 W. 28th St., New York 1, N. Y. (Item 317)**

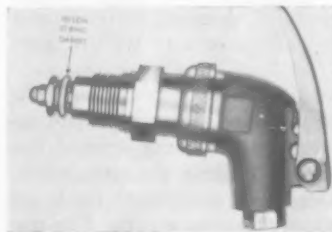


### Woven Wire Back Stop

This woven wire curtain offers a solution to the problem of containing flying chips of titanium in a small area around a drop forge.

Earlier attempts employing solid steel barriers failed as the hard chips either ricocheted dangerously or ripped through the rigid shield. Woven wire, on the other hand, possesses flexibility and catches the flying bits of metal, equalizes the impact and drops them harmlessly to the floor. The curtain is suspended from a bar mounted across the tops of two A frames. The bottom of the curtain is left unattached to allow maximum flexibility of the woven wire fabric. The curtains offer the additional advantage of being easily removed from mounts and rolled for storage when the forge is not in use. In fabricating the specialized backstop curtain, 14-gauge carbon steel wire mesh has been used.

**Cambridge Wire Cloth Co., Cambridge, Md. (Item 318)**



### Safety Drum Faucet

An improved, leakproof, self-closing drum faucet has a sturdy

spring located within the body that maintains a liquid-tight closure at all times. Hand pressure on the large, lever-type handle is necessary to push the spring back and permit the liquid flow. The valve closes automatically and prevents dripping on floors.

A new type Kel-F or Teflon, O-Ring withstands

For More Information—Circle Item Number on Reader Service Postcard



the destructive action of chemicals which deteriorate synthetic rubber gaskets.

Two types are available: (1) a self-positioning, swivel-type faucet which may be screwed tightly into the drum opening and the spout portion, regardless of position, then swiveled to the correct angle for dispensing where it is secured by a knurled locking ring; and (2) the usual rigid type faucet which generally requires a thread compound to form a liquid-tight connection. The body of the faucet may be of non-sparking brass or stainless steel. A cylindrical perforated brass fire baffle, which also serves as a strainer, is located within the faucet at the dispensing end where it can easily be removed for cleaning. The fire baffle prevents exterior fire from entering and igniting the drum contents.

**The Protectoseal Co., 1920 S. Western Ave., Chicago 8, Ill. (Item 319)**



### **Fire Extinguisher**

The "Dri-Power" dry chemical fire extinguisher has a three-pound capacity, UL listing and a rating of 4 B:C.

Pressurized initially with nitrogen gas at 130 pounds, the extinguisher can be re-pressurized with nitrogen at any of the company's service units. It is hydrostatically tested for 800 pounds and has a rupture point of 3,000 pounds.

The cylinder is one-piece spun steel meeting I.C.C. standards and all working parts are brass or bronze. The stainless steel pressure gauge is marked for instant check on its operable condition.

The unit weighs approximately eight pounds and is supplied with either a wall or truck bracket.

**Safety First Products Corp., 175 Saw Mill Road, Elmsford, N. Y. (Item 320)**



### **Combustible Gas Alarm**

The "Sentinel" portable, audible combustible gas alarm has a visible indicator meter and is designed for confined area use.

Typical applications are welding operations in confined areas that have contained flammable liquids, and underground tunnels around streets and excavation projects where gas lines are being laid.

The unit is light and easy to handle because the

battery charger is a separate unit which does not need to be carried at all times.

A remote detector, alarm light for noisy locations, and a sample-drawing attachment are available as optional modifications. With the sample-drawing attachment, a separate indicator is not required. The detector unit and sample-drawing attachment has been designed for easy changeability.

**Johnson-Williams, Inc., 2618 Park Blvd., Palo Alto, Calif. (Item 321)**



### **Drum-Karrier**

Without tools, one operator can quickly and easily attach and securely lock this drum carrier to any standard steel drum for safe, non-tilting transit via monorail or crane, or for hoisting with a chain block. Positive, improved type tilt locks hold the drum in a vertical position during travel or hoisting and permit one man to safely control the tilting of the drum for mixing or dispensing contents over a receiving tank.

The Drum-Karrier fits all standard double-chime steel drums. It is foolproof and requires no complicated directions or instructions for safe and efficient usage.

The welded, all-steel construction assures trouble-free service.

**Morse Mfg. Co., Inc., 727 W. Manlius St., East Syracuse, N. Y. (Item 322)**



### **Shear Machine Guard**

This shear machine guard offers increased opportunity for safeguarding workers in metal scrapping operations.

Because shears usually run all day, protecting users and passersby from the chopping blade is an important factor. The new guard is easily installed and because it fits all popular shears, its installation can be accomplished by any competent mechanic.

The new guard is in the form of a sheet metal barrier. The long horizontal side drops close beside the rising and falling shear blade when it is not in use. The shear operator must step on a low-mounted foot pedal to start a counterweight moving down to raise the barrier. When foot pressure is removed the barrier falls quickly into the guard position.

**Guard, Inc., Wisconsin Dells, Wisconsin. (Item 323)**

For More Information—Circle Item Number on Reader Service Postcard



### Spot Fire Detectors

Three fire detectors make it possible to detect fire by a variety of methods — rate-of-temperature-rise, fixed temperature, or a combination of both.

Known as Fyrindex detectors, the spot-type elements can be combined with other components to create a complete fire alarm system.

These systems can close doors or windows, shut off machinery, and automatically perform other functions in addition to triggering an alarm.

All three units are self-resetting. This is an important safety factor as they can be tested by simply applying heat. This cannot damage the detector and testing does not require the replacement of any part.

The first detector operates on both the fixed temperature and rate-of-temperature-rise principle. Each unit provides twenty-five hundred square feet of protection and are spaced on 50-ft. centers.

The second unit causes an alarm to sound when a fixed temperature has been reached. Detectors which trigger electric alarms at 135 degrees F and 180 degrees F are available. Each fixed temperature unit is based on 15-foot centers and gives 225 square ft. of coverage.

The rate-of-temperature-rise detector is based on 30-ft. centers and provides protection for 900 square ft. Any temperature rise of over 15 degrees F per minute pneumatically closes an electric switch which triggers an alarm.

**Walter Kidde & Co., Inc., 145 Main St., Belleville 9, N. Y. (Item 324)**



### Marking Tape

A new roll tape for marking all types of industrial hazards is packaged in rolls up to 90 feet. This self-adhering

tape is said to be one of the easiest, fastest, and most economical ways of marking industrial hazards for temporary or permanent identification.

Hazardstripe tape is available in two- and four-inch widths and adheres to any clean surface. Both Hazardstripe and Hazardcheck for all eye hazards eliminate messy painting and stenciling. The pre-printed roll tape has yellow and black stripes and can be used on beams, posts, tractors, stairs, handrails, projections, dead-ends, lane marking, trucks, docks, hoods, railings, etc.

The line is offered in cloth, vinyl or Westlites Hazardstripe for reflective use.

**Westline Products Div., 655 E. 2nd St., Los Angeles 54, Calif. (Item 325)**

### Metal Pipe Wrenches

Improved wear-resistance, hardness and strength are provided by nonferrous alloy jaw inserts now available on all of this manufacturer's metal pipe wrenches.

The new inserts, with a minimum Rockwell hardness of 45-C, wear from two to three times longer than the Beryllium Copper jaws previously used. They are also non-magnetic, corrosion-resistant, and spark-resistant.

Factory Mutual Laboratories have approved the new inserts for use wherever flammable gases, explosives, or other similar hazardous conditions exist.

Replaceable upper and lower jaw inserts such as these are an economical feature that allow long use of the wrench. The inserts eliminate the necessity of purchasing an entire jaw when the teeth become worn.

**Ampco Metal, Inc., 1745 S. 38th St., Milwaukee 46, Wisconsin. (Item 326)**



### Waterless Hand Cleaner and Dispenser

Ply waterless hand cleaner complies with standards for waterless hand cleaners developed through recent research by the U.S. Armed

Forces.

The cleaner derives its cleansing action from a water-soluble synthetic wetting agent. It contains no petroleum solvents, scrubbers or any component which is not soluble in water. It is low-alkaline, with a pH of 8 or less. It has no adverse effects on rubber or fabrics.

Field tests have shown that after prolonged use of the cleanser, most subjects' skins had improved. Tests also found that waterless hand cleaners were more effective than ordinary soaps in removing tenacious soils, such as tars, paints, inks, rubber cements, etc. The cleaner is designed to promote cleanliness in plant areas remote or not conveniently laid out for access to regular washroom facilities. It may be used with or without water for removal of irritating soils. Availability of waterless cleaner will minimize workers' use of irritating solvents or degreasers for cleanup. A new dispenser that may be used with the cream features a one-piece cast aluminum construction with the plunger as the only moving part. The plunger measures a controlled quantity per stroke. Breakage and maintenance are minimized by the heavy-duty one-piece construction.

**Milburn Co., 3246 E. Woodbridge, Detroit 7, Mich. (Item 327)**

For More Information—Circle Item Number on Reader Service Postcard

### Line Hose, Insulators and Blankets

Ubangi line hose, Ubangi insulator hoods and corona resisting blankets are for use with live line tools on circuits which are energized up to and including 15,000 volts. The line hose and insulator hoods have been designed because the trend toward higher distribution voltages has created a demand for special protective equipment to insulate temporarily such lines for the purpose of guarding against accidental contacts of both a personal and mechani-

cal nature. The hose and hoods are corona resistant, flexible, non-breakable, easily stored, and economical. The blankets, constructed of a special compound, are not as flexible or as tough as natural rubber blankets, but they are resistant to corona damage which makes them desirable when used in the higher distribution range.

**W. H. Salisbury & Co., Morgan & Kinzie Sts., Chicago 22, Ill. (Item 328)**

## NEWS ITEMS



**C. C. VanderWall**

### *Ansul Chemical Company*

Clifford C. VanderWall has been elected vice-president in charge of manufacturing.

He will direct chemical and mechanical operations of the company and has been with the fire extinguisher manufacturer since 1946 and

became director of manufacturing in 1955.

\* \* \*

### *Columbus McKinnon Chain Corp.*

Herbert Bays Moore, Rock Hill, S. C., has been appointed sales representative for Chisholm-Moore hoists in the Southeast.

Charles A. Schnell has been transferred to the Detroit area as a sales representative for the hoists, and William J. Hildebrand has been appointed sales representative for Columbus McKinnon industrial chains for Chisholm-Moore hoists in the Cleveland area.

\* \* \*



**A. P. Hesse**

### *Aluminum Safety Products*

Arthur P. Hesse has been appointed district sales manager of the Cincinnati area for this manufacturer of stairways and span scaffolds, ladders and stages.

Mr. Hesse formerly was with Oral T. Carter & Associates where he sold material

handling equipment.

\* \* \*

### *Magnesium Company of America*

This manufacturer of dockboards, yard ramps, cross-over bridges, hand trucks and pallet dollies, has announced that KinCo, Inc., will represent the company in Eastern Massachusetts and Vermont. The E. Furnish Equipment Company, Cincinnati,

Ohio, will represent the company in Cincinnati and Dayton.

Yaeger and Sons, 1512 E. Olympic Boulevard, Los Angeles 21, Calif., has also been appointed as exclusive representative. The company will represent Magnesium Company in the Los Angeles trade area.

\* \* \*



**J. W. Taylor**

### *Iron Age Safety Shoes, Div. H. Childs and Company, Inc.*

J. W. Taylor has been named Southern sales representative for this Pittsburgh manufacturer of safety shoes. His headquarters will be at 3415 Mountain Lane, Birmingham, Ala., and he will cover the states of Alabama, Georgia, and Mississippi and

parts of Florida, Tennessee, South Carolina, Arkansas, and Louisiana.

\* \* \*

### *The Fibre-Metal Products Company*

To better supply the Canadian market, this Pennsylvania manufacturer of safety equipment has announced the formation of a warehouse for Eastern Canada, Fibre-Metal (Canada) Limited, at 1773 Avenue Road, Toronto. Mr. Gilbert Doyle, recently appointed the Fibre-Metal representative in Canada will be general manager. The warehouse has been established to afford Canadian distributors of Fibre-Metal products a readily available central merchandise stock.

\* \* \*



**Frank Brunett**

### *Boyer-Campbell Co.*

Frank Brunett has been appointed to cover Western Michigan by this Detroit manufacturer of safety equipment.

Mr. Brunett has a thorough experience in the field and is a member of the American Society of Safety Engineers.

For More Information—Circle Item Number on Reader Service Postcard



# TRADE PUBLICATIONS

These trade publications will keep you up-to-the-minute on new developments in safety equipment and health products. All catalogs are free, and will be sent without obligation. Just circle publication number on the Reader Service Postcard.



## Floor Absorbents:

Safety and all-purposeness are central features of floor absorbent detailed in comprehensive brochure. Use of floor absorbents in industry explained, advantages of product charted, flame and breakdown resistance test results shown in photos, applications illustrated. Wyandotte Chemicals Corporation, Wyandotte, Mich.

For more details circle No. 401  
on enclosed return postal card

## "Plug-In Limit" Switch:

This bulletin No. 20 announces the revolutionary new MICRO SWITCH "Plug-In Limit," the precision limit switch which can be replaced in only seconds. This switch promises to be the solution of automatic production line downtime problems incurred by the replacing of ordinary limit switches. Complete description of the switch, drawings and photographs, are included. All five actuator types available are described. Micro Switch, Division of Minneapolis-Honeywell Regulator Co., Freeport, Illinois.

For more details circle No. 402  
on enclosed return postal card

## Safety Ladders:

New 8-page illustrated catalog gives complete specifications for the new line of Alco-Lite mobile all-steel Safety Ladder-Stands. The Ladder-Stands move easily on special ball-bearing casters which retract automatically under weight. Height, platform size, width and depth, and overall height for 30 models from 1 to 8 steps is given. Aluminum Ladder Co., Dept. 52, Worthington, Penna.

For more details circle No. 403  
on enclosed return postal card

## Materials Handling Devices:

Catalog C-1 illustrates and describes company's complete line of Materials Handling Devices. Printed in two colors, this catalog contains 16 pages of product illustrations, application drawings, tables, diagrams, engineering data and other technical knowledge. Merrill Brothers, Caspian St., Maspath, N. Y.

For more details circle No. 404  
on enclosed return postal card

## Protected Clothing:

A new line of polyvinyl chloride-impregnated industrial clothing—garments, gloves and aprons—combining light weight, unusual flexibility and resistance to chemicals, oils and abrasion is illustrated in three bulletins published by Jomac, Inc., Philadelphia 38, Penna. The bulletins point out the advantages of these clothing items in providing protection for workers in such in-

dustries as chemical, petroleum, drug and food processing. The clothing will resist virtually all chemicals used throughout industry, including acids, alkalis, oils, solvents, fats, greases, alcohols and waxes. The individual bulletins include sizes, styles and colors that are available.

For more details circle No. 405  
on enclosed return postal card

## Fire Extinguishers:

A new 12-page catalog which completely describes and illustrates portable fire extinguishers, built-in carbon dioxide fire extinguishing systems, smoke detecting systems, and rate-of-rise fire detecting systems is available from Walter Kidde and Co., Inc., Main St., Belleville 9, N. J. The equipment covered in the book is largely for commercial, institutional, or industrial fire hazard applications.

For more details circle No. 406  
on enclosed return postal card

## New Fabrics for Work Clothes:

Latest advances in acid-resistant and lint-free industrial apparel are described and illustrated in the 1958 edition of Worklon's catalog and information book. On its pages is introduced a new group of acid-resistant 100 per cent DuPont Dacron work clothes in blue and in grey, including shirts, pants, coveralls and laboratory coats. Also presented for the first time, in response to countless requests from Worklon customers, are new lint-free, acid-resistant 100 per cent DuPont Orion coveralls. Resistance of the various fabrics to acids, caustics and other chemicals is fully documented with comprehensive laboratory reports relating to technical properties. Worklon, Inc., Dept. PR-1, 253 W. 28th St., New York 1, N. Y.

For more details circle No. 407  
on enclosed return postal card

## Safety Signs:

Colorful, 6-page catalog illustrates safety signs for industrial accident prevention. Illustrated are eye hazard and goggle signs, machine hazard signs, miscellaneous signs. Complete specifications and prices are included. Stonehouse Signs, Inc., Stonehouse Building, 9th at Larimer, Denver 4, Colo.

For more details circle No. 408  
on enclosed return postal card

## Reference Guide:

The 1958 Dow Corning Reference Guide, describes over 150 commercially available Dow Corning silicone products, including many introduced within this past year. Contains detailed charts, tables, graphs and data on properties and performance, along with illustrated examples on how silicones can cut costs, simplify design and add new

sales appeal to products in every field of application. Cross-indexed for ready reference. 16 pages, heavily illustrated. Dow Corning Corp., Midland, Mich.

For more details circle No. 409  
on enclosed return postal card

## Floor Care:

"What Every Executive Should Know About This Vital One Thousandth of an Inch" is the title of a 32-page booklet on the latest and most efficient developments in floor care, being offered free by the Masury-Young Co., Department NS, 76 Roland St., Boston 29, Mass. The booklet will be of great assistance to executives in their efforts to improve safety through proper floor care. It also contains helpful information on various types of floors, along with recommendations on the proper treatment required for maintaining each type of floor. Among the types of floor surfaces covered are asphalt, rubber, vinyl, cork tile, wood, concrete, terrazzo and marble.

For more details circle No. 410  
on enclosed return postal card

## Safety and Sense Save Pain and Expense:

The Macwhyte Co., 2902-14th St., Kenosha, Wis., have released a pocket size card that lists five points that will increase your safety and make your wire rope slings last longer.

For more details circle No. 411  
on enclosed return postal card

## Power Pumps:

Catalog No. 10 describes the complete line of rotary power pumps manufactured by Blackmer Pump Co., Grand Rapids 9, Mich. Fully illustrated, the catalog features more than two dozen photographs and drawings depicting their highly diversified power pump lines, which include external anti-friction bearing, gland bearing, and internal anti-friction bearing types, in both sliding and swinging vane styles. Special Blackmer design and construction features are also pictured and described, with particular attention devoted to replaceable cylinder liners, vanes, push rods, integral pressure control valves, cartridge type seals, gearhead construction, flanged pipe connections, jacketed heads, etc. The catalog also contains an easy to use pump selection and application guide, dealing with simplified performance characteristics, and outlining a system for determining proper pump construction for each job—plus separate sections illustrating gear and belt-driven units, and the Blackmer EZY-KLEEN liquid strainer line.

For more details circle No. 412  
on enclosed return postal card



### Emergency Lighting:

The Standard Electric Time Co., Springfield, Mass., has issued a new 20-page two-color catalog on its Emergency Lighting Systems. In addition to fully describing these Underwriters' Laboratories approved systems, which feature 100 per cent electrical supervision, the new catalog contains complete information and specifications on all components, fixtures and exit signs. Also included are excerpts from the National Electric Code requirements for emergency lighting equipment.

For more details circle No. 413  
on enclosed return postal card

### Steel-Toe Safety Shoes:

New 16-page catalog lists complete details on 72 different safety shoe styles for men and women; includes buying guide on how to select the best sole and construction for different industrial conditions and hazards. Lehigh Safety Shoe Co., Emmaus, Penna.

For more details circle No. 414  
on enclosed return postal card

### The Prevention of Occupational Skin Diseases:

Two-thirds of all occupational diseases are skin diseases, according to state compensation board reports. How to prevent many occupational skin diseases is revealed in this booklet, which is offered by Huntington Laboratories, Inc., Huntington, Ind. It has been especially prepared for the industrial management and for those charged with public health and safety. Many medical directors of some of our largest chemical and dye manufacturing plants, automobile plants, oil refineries, fabric manufacturing plants and others where occupational dermatitis was formerly a severe problem, report dramatic improvement following enforcement of the preventive measures described in this booklet, according to the company.

For more details circle No. 415  
on enclosed return postal card

### Fire Department Supplies:

A comprehensive listing of all fire fighting equipment and accessories available to the industry are shown in this 84-page book available from American LaFrance Corporation, Department 570, Elmira, New York. Illustrated and described are company's complete line of fire extinguishers inspected and approved by the Underwriters' Laboratories to hoses, accessories, signals and lighting, safety equipment, and other fire apparatus.

For more details circle No. 416  
on enclosed return postal card

### Lens Cleaning Tissues:

New 4-page folder describes chemically treated No-Fog Lens Cleaning Tissues which clean and fog-proof with plain water. Non-abrasive and may be used on glass or plastic. Prices and many uses are listed. Carhoff Co., 11706 Kinsman Road, Cleveland 20, Ohio.

For more details circle No. 417  
on enclosed return postal card

### Industrial Gloves:

Fully illustrated catalog sheets give complete specifications and factual information on the entire Pioneer line of liquid-proof industrial gloves. There is a detailed performance data sheet to guide the industrial glove buyer in selecting the best gloves for a particular industrial application. This sheet gives at-a-glance information on the actual performance of Pioneer industrial gloves when used with over 100 oils, acids, caustics and solvents. Described are Stanzoll All-Neoprene Gloves, new

Stanzoll Pacemakers (Neoprene-Coated Flannel), Stanzoll Duplex Gloves (Neoprene-Coated "Interlock" Knit Lined) and Pylox-Coated Stanflex Gloves. Additional sheets are also included on Pioneer's new Nimble Fingers Gloves (made of tissue-thin Pylox) and Sheer Grip (thin gauge gloves of natural latex and neoprene). The Pioneer Rubber Co., 296 Tiffin Road, Willard, Ohio.

For more details circle No. 418  
on enclosed return postal card

### Winter Liners:

A new 4-page illustrated folder describes the new assortment of Winter Liners for All Protective Hats marketed by Mine Safety Appliances Co., 201 N. Braddock Ave., Pittsburgh 8, Pa. Photographs of the individual liner models are appropriately labeled to identify features that contribute to both the comfort and safety of the wearer. Liners with no metal parts and with provision for extra insulation protection over head, neck and ears are especially engineered for use with the M-S-A Shockgard—the protective hat worn in those areas of operation involving possible exposure to the hazard of electrical shock. Another distinctive liner pictured in the folder is the 100 per cent wool M-S-A Knitted Type Winter Liner designed for use with all types of protective hats, including the Shockgard. Included in the folder are specific descriptions of each of the available types of winter liner models, with appropriate catalog designations for accurate order listings.

For more details circle No. 419  
on enclosed return postal card

### Industrial Heaters:

A completely new 26-page product bulletin, describing the construction, application and performance features of the Herman Nelson Industrial Heater, has been released by American Air Filter Co., Inc., 215 Central Ave., Louisville 8, Ky. Bulletin 750-A explains in detail the operation of the heating and ventilating unit that is designed to meet industrial requirements, whether for make-up air or for plant heat load. Six pages are devoted to explanations of applications and arrangements of the unit, such as horizontal, vertical upright, vertical inverted, and Ell shaped; fan sections; coil sections; filter sections; damper sections; bases; wall intakes; humidifiers. Also included are performance graphs and charts pertaining to steam capacities, air flow resistance and other air flow data, dimension diagrams and tables for all models and arrangements of the heater.

For more details circle No. 420  
on enclosed return postal card

### Safety Gloves and Clothing:

Covering everything from the new seamless finger guards to rubber boots, this new catalog fully illustrates and describes practically every type of safety apparel needed for practically every type of industry. Among its pages will be found leather and Terri-Cord flame-resistant gloves and mittens; protective curtains, vests, sleeves and aprons; glove savers; palm protectors; hand pads and knee pads; liquid-proof work suits; rain hats; finger cots and vinyl plastic aprons, etc. A lengthy chart indicating the proper gloves for each specific chemical usage covers an entire two-page spread. Advance Glove Mfg. Co., 901 West Lafayette Blvd., Detroit 26, Mich.

For more details circle No. 421  
on enclosed return postal card

### Sound Control:

How the tremendous noise of a gas turbine engine can be effectively silenced for the first time is explained in a 12-page brochure recently published by the Industrial

Sound Control Department of Koppers Co., Inc., Metal Products Division, P. O. Box 296, Baltimore 3, Md. The detailed brochure outlines ten easy steps which will enable a gas turbine engineer to quickly determine what type of sound control unit is necessary to silence his turbine. This is possible, the company says, because Koppers gas turbine silencers are standardized and because the range of types and sizes are applicable to a wide variety of conditions. Included in the brochure are pictures and drawings of two typical types of Koppers gas turbine silencers.

For more details circle No. 422  
on enclosed return postal card

### Wire Parts-Handling Baskets:

Bulletin MS-57 describes the wide range of wire parts-handling baskets available for conveying and processing production parts. Also shown are conveyor hooks, plating racks and many special purpose materials handling items. Wire machinery guards, conveyor catch guards and other safety products manufactured by the firm are also shown. Wire and Iron Products, Inc., 1725 16th St., Detroit 16, Mich.

For more details circle No. 423  
on enclosed return postal card

### Handling Hydrogen Peroxide:

A new 4-page brochure which provides detailed information for the safe handling of Hydrogen Peroxide (H-202) in 30-gallon drums, has been issued by the Columbia-Southern Chemical Corp., 632 Fort Duquesne Blvd., Pittsburgh 22, Penna. The six-point safety message includes data on placing drums for storage and opening; installing the special valve assembly; placing the drum properly; withdrawing peroxide solution; how to completely empty the drum; and care of the empty drum. In addition to the above listed safety categories, the brochure includes a complete text of safety pointers.

For more details circle No. 424  
on enclosed return postal card

### Protecting Floors:

A 4-page, two-color bulletin describing recommended practices and procedures for using the various types of Cortland Emery Aggregate is available from Walter Maguire Co., Inc., 60 East 42nd St., New York, N.Y. The bulletin offers clear specifications for preparing, mixing, curing and protecting new floors with Types "C," "SH" and "20" Cortland Emery Aggregate. The process of using Type C for monolithic and granolithic new flooring applications as well as resurfacing and patching old concrete floors is outlined in detail. Recommended methods are described for using Type SH which is graded for surface hardening floors. Use of emery aggregate for slip-proofing concrete floors is discussed.

For more details circle No. 425  
on enclosed return postal card

### Explosion-Proof Refrigerator:

Bulletin describes an explosion-proof refrigerator which is especially designed for use in hazardous locations and is classified by Underwriters' Laboratories as a Class I, Group C and D, device which is approved for hundreds of locations where explosive atmospheres are encountered. Among these locations are hospitals, refineries, paint and lacquer manufacturing plants, laboratories, drug and pharmaceutical plants, oil and gasoline terminals and chemical plants. Conventional details concerning size, shape, interior design and other specifications of general interest are covered in the descriptive brochure. Kelmore Service, Inc., 599 Springfield Ave., Newark, N. J.

For more details circle No. 426  
on enclosed return postal card

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**Prolax**  
Antiseptic  
heavy-duty  
powdered hand cleaner  
contains hexachlorophene

Borax scrubber in Prolax powder acts like millions of fine tiny brushes. Makes stubborn grime vanish quickly.

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of your premises ask  
your Dolge service man



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the MILLER Adjustable Climber, with improved removable gaff and adjustable shank, is the most sensational climber in the safety field. For safety, long life and economy specify MILLER. Write for full technical information.



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ADJUSTABLE CLIMBER

**Miller Equipment Co., Inc.**  
MILWAUKEE, WIS.

IN CANADA:

**SAFETY SUPPLY CO., TORONTO**

Circle Item No. 94—Reader Service Card

## Index to Advertisers

A comprehensive Classified Safety Product Index and a Directory of Safety Equipment Sources appear in the March, 1957 Issue.

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Circle Item No. 95—Reader Service Card

National Safety News, February, 1958

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—feature equipment and services that will help you solve accident problems in your plant. Instead of making a "mental note," make sure you get full information by sending in the card. If no item number appears with an ad, it will be found on the opposite page, next to the arrow. Cover position ads are shown on the cards as: IFC—inside front cover; IBC—inside back cover; BC—back cover.

## *New Safety Equipment*

—shown in the special section has been carefully reviewed. Only new products or noteworthy improvements in existing equipment are considered eligible for this section.

## *Trade Publications*

—are catalogs, brochures, spec sheets and booklets—a wealth of helpful literature—describing equipment and services that will assist you in comparing before you buy. You can build a valuable safety equipment reference file with these free publications.

**IMPORTANT**—Be sure to fill in your name, organization and address in the space provided on this side of the postcard.

National Safety News, February, 1958

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### PRODUCTS ADVERTISED:

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National Safety News, February, 1958



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# is my choice



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| <b>BATON ROUGE, LA.</b><br>Guardian Safety Equipment Co.<br>3615 Capitol Heights Ave. | <b>MILWAUKEE, WIS.</b><br>Universal Safety Equipment Co.<br>3155 South Seventh Street                             |
| <b>BIRMINGHAM, ALA.</b><br>Industrial Safety Supply Co.<br>1727 Huntsville Road       | <b>NEW YORK, N. Y.</b><br>C/O ORANGE, N. J.   |
| <b>BOSTON, MASS.</b><br>General Equipment Corporation<br>261 Franklin Street          | <b>ORANGE, N. J.</b><br>Guardian Safety Equipment Co.<br>400 South Jefferson Street<br>(New York-New Jersey Area) |
| <b>BUFFALO, N. Y.</b><br>The Watson Company<br>1443 South Main Street                 | <b>PEORIA, ILL.</b><br>Standard Industrial Products Co.<br>920 North Garfield Avenue                              |
| <b>CHICAGO, ILL.</b><br>Universal Safety Equipment Co.<br>5115 West Diversy Avenue    | <b>PHILADELPHIA, PA.</b><br>Guardian Safety Equipment Co.<br>216 South 45th Street                                |
| <b>CINCINNATI, OHIO</b><br>Williams & Co., Inc.<br>3231 Frodoia Avenue                | <b>PITTSBURGH, PA.</b><br>Williams & Co., Inc.<br>901 Pennsylvania Avenue   |
| <b>CLEARWATER, FLORIDA</b><br>Car-Med Equipment Company<br>608 Palm Avenue, Bldg. 2   | <b>ST. LOUIS, MO.</b><br>Safety, Incorporated<br>2080 Olive Street  |
| <b>CLEVELAND, OHIO</b><br>Williams & Co., Inc.<br>3700 Parkside Avenue                | <b>ST. PAUL, MINN.</b><br>Continental Safety Equipment, Inc.<br>1551 Selby Avenue                                 |
| <b>COLUMBUS, OHIO</b><br>Williams & Co., Inc.<br>900 Williams Avenue                  | <b>SALT LAKE CITY, UTAH</b><br>Universal Safety & Fire Equipment Co.<br>727 South West Temple                     |
| <b>DALLAS, TEXAS</b><br>Guardian Safety Equipment Co.<br>3670 Flaxley Drive           | <b>SAN MATEO, CALIF.</b><br>Guardian Safety Equipment Co.<br>220 East Third Avenue                                |
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| <b>HOUSTON, TEXAS</b><br>Guardian Safety Equipment Co.<br>280 Sandman Street          | <b>TOLEDO, OHIO</b><br>Williams & Co., Inc.<br>946 Kane Street  |
| <b>KANSAS CITY, MO.</b><br>Safety, Incorporated<br>1716 East 31st Street              | <b>TULSA, OKLA.</b><br>Guardian Safety Equipment Co.<br>1740 South Main Street                                    |
| <b>KNOXVILLE, TENN.</b><br>Safety Equipment Distributing Co.<br>432 West Main Avenue  | <b>MEXICO CITY, D. F.</b><br>Safety Equipment, S. A.<br>Sullivan No. 95   |
| <b>LOS ANGELES, CALIF.</b><br>Guardian Safety Equipment Co.<br>7223 South Main Street | <b>MONTREAL, CANADA</b><br>The Butler Optical Company, Ltd.<br>1520 Mountain Street                               |



## Eye Protection

### 482A VINYLLITE GOGGLE



Larger face mask  
— greater  
protected area

Deeper cup —  
increased lateral  
protection — easily  
fits over all safety  
glasses and  
personal glasses.

Modified  
nosepiece — aids  
comfort, facial fit.

# It's AO's New "482A"!

(Vinylite Mask Goggle)

Once again American Optical engineering and research make a good product even better! This light, comfortable flexible mask goggle offers the trustworthy, *optically correct* protection which has made it so popular PLUS the new features above. It's a better buy than ever! Recommended for protection against flying particles striking from any direction in babbitting, chipping, cutting rivets, light grinding, on hand or machine tool work, or where spark-explosion hazards endanger. Your nearest AO Safety Products Representative can supply you.

### Quick Facts

**Lens** — Interchangeable, one-piece acetate, easily removed and replaced. Curved slightly for increased field of vision. Provides greatest worker comfort, safety, efficiency.

**Frame** — Soft, face-hugging vinylite provides maximum flexibility and full protection.

**Headband** — Elastic, easily adjustable.

**Color** — Clear frame, clear or green lens. For green frame, clear or green lens specify Catalog No. 483A.

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